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A SARCOPHAGUS AT LANUVIUM

An antique sarcophagus (Fig. 1) has long stood in a piazza of Lanuvium, which although mentioned by Baedeker seems to have escaped the notice of archaeologists. Reinach's and Robert's collections of antique reliefs omit it and Rodenwaldt does not include it in his recent article on columnar sarcophagi.[1] It is, as far as I can discover, unpublished.

A central gable and lateral arches supported by spirally fluted

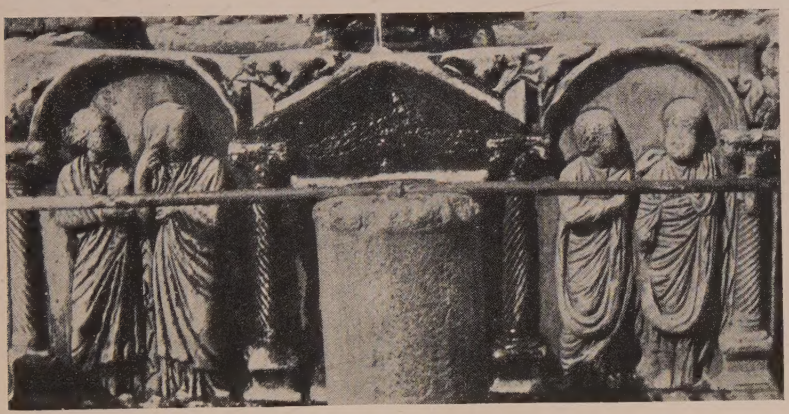


Figure 1. Sarcophagus at Lanuvium

columns divide the decoration of the trough into three nearly equal sections and form a continuous architectural framework. This composition at once allies our sarcophagus with the western derivatives of the monuments known as "Sidamara", or more properly as Asiatic sarcophagi. The architectural composition is found in this form in a group of three western sarcophagi, two of which are in Rome in the Vatican and Terme Museums, the third in Copenhagen,[2] and on two of more eastern character at Concordia,[3] and the former "Ludovisi" sarcophagus now in the Villa Savoia at Rome.[4] As on the last two examples, portrait groups occupy the lateral niches, the husband with an attendant on the right, the wife

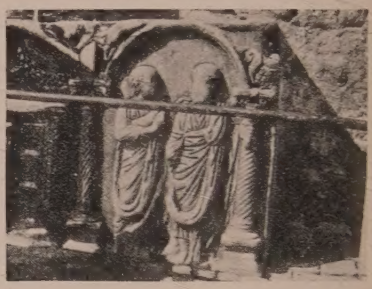
[1] *Säulensarkophage, Röm. Mitt.*, XXXVIII, 1923, pp. 1–40.

[2] Amelung, *Die Sculpturen des Vaticanischen Museums*, II, taf. 18, no. 68; Petersen, *Röm. Mitt.*, XV, 1900, p. 324, fig. 1; Morey, *Sardis*, vol. V, I, *The Sarcophagus of Claudia Antonia Sabina and the Asiatic Sarcophagi*, ill. 101.

[3] Garrucci, *Storia dell'Arte Cristiana*, V, 362, 1; Morey, *op. cit.*, p. 51, ill. 93.

[4] Garrucci, *op. cit.*, V, 362, 2; Morey, *op. cit.*, ill., 94; Strzygowski, *Orient oder Rom.*, p. 50, fig. 18.

similarly accompanied on the left. The central space, however, is different, as on the Lanuvium sarcophagus a half open tomb portal is represented (Figs. 2, 3 and 4). This theme, a common feature of



FIGURES 2 AND 3. DETAILS OF SARCOPHAGUS AT LANUVIUM

the left end of the Asiatic sarcophagi,[1] was transferred on Roman imitations of the Asiatic type to the place of honor on the front, and is thus found on six columnar sarcophagi [2] (Fig. 5), none of which,

FIGURE 4. SKETCH OF SARCOPHAGUS AT LANUVIUM

[1] Morey, *op. cit.*, ills. 41, 55, 59, 67, 70, 71, 84.

[2] In the Vatican, Belvedere, Amelung, *op. cit.*, II, taf. 17, no. 60; Gusman, *L'Art Décoratif de Rome*, II, pl. 103: in the Conservatori, fig. 5, Amelung, Text II, p. 156, Morey, p. 56; New York, Metropolitan, a child's sarcophagus, very like the one in the Conservatori; Florence, Palazzo Riccardi, Morey, p. 56, ill. 99; Petrograd, Hermitage, Morey, ill. 98; Vatican, Belvedere, Amelung, II, taf. 13, no. 48. Tomb portals also occur on the following strigil-sarcophagi: Rome, Palazzo Barberini, Moscioni photo. 21808; Pisa, Campo Santo, Lasinio, *Sarcofagi e Urne del Campo Santo di Pisa*, pl. XXI, no. LXXIII; Reinach, *Rép. des Reliefs*, III, 125; Philippeville, *Musées de l'Algérie et de la Tunisie*, vol. VI, pl. IV, 3; and a fragment in the Conservatori, Rome. The strigil was merely a less expensive form used both in the Roman and Christian periods to fill the larger part of the front, and in consequence has little significance in itself, but adapts forms and traditions from other types. It certainly cannot be used, as hitherto has often been the case, to prove an early date.

however, is like our example in the arrangement of a continuous arch and gable. Spiral columns appear on all but one of the sarcophagi cited, but the form of capital and the spandrel ornament of the Lanuvium marble are unique within the group. The right end of the trough is uncarved, but the left shows a griffin in very low relief and against a plain background, *i.e.* one without any architectural framework. The cover has disappeared and the sarcophagus is at present used as a watering trough, its base embedded several inches or more in the pavement. It is impossible, consequently, to tell whether it has a decorated or plain podium.

As will be seen from the photograph (Fig. 1), the sculpture has suffered only minor injuries, the right hand of the husband is gone

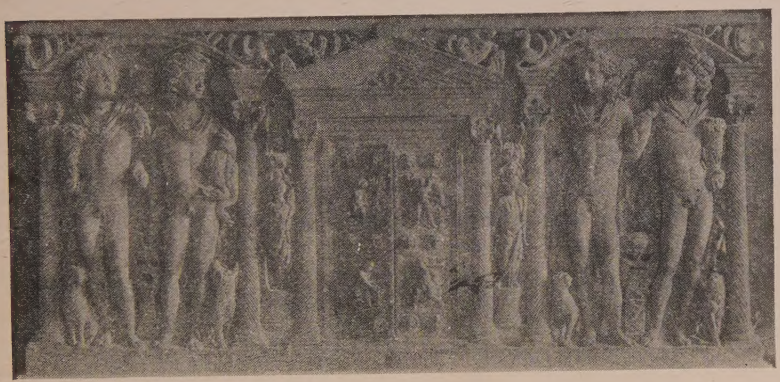


FIGURE 5. SARCOPHAGUS IN THE CONSERVATORI MUSEUM, ROME

and sections of the spandrel ornament have been broken off. The whole trough is badly weather-beaten, however, and practically all details of the faces are lost. The surface of the draperies also is much smoothed down, accentuating the original drilled gullies of the folds. The subject matter of the spandrels has become scarcely recognizable, but seems to be two animals in battle in the central spandrels next the pediment and a half palmette at the ends. The panels of the doors are plain and show no signs of ever having been ornamented. This is unlike the usual tomb portal of the western type, where we find Medusa or lion's heads or figures. The western portal, moreover, shows a lintel plainly treated with recessed orders or a series of mouldings. The tomb door of the Asiatic sarcophagi presents a striking contrast to this. The panels of the door are left plain, while there is an elaborately carved lintel. At Lanuvium we also have the plain panels and a decorated lintel, but the Asiatic corbels have been developed into elaborate jambs. The indefinite

and impressionistic treatment of this ornament, very different from the clear-cut Roman forms, also allies our sarcophagus with the eastern series. The garland filling the gable is in very low relief

FIGURE 6. THE LUDOVISI SARCOPHAGUS, VILLA SAVOIA, ROME

indeed, and shows the same technique. A suggestion of acroteria appears at the ends of the pediment, and in this our sarcophagus recalls the one at Concordia (Fig. 8), only that there the acroteria

FIGURE 7. DETAIL OF THE LUDOVISI SARCOPHAGUS

are covered with leaves, while here they were plain, and possibly unfinished.

It is to the sister sarcophagus of that at Concordia, the one

formerly in the Villa Ludovisi (Figs. 6, 7), however, that the closest parallel can be drawn. Placing the two side by side one immediately notices great similarities. Not only are the general proportions of the Ludovisi and Lanuvium sarcophagi the same, but the arrangement of arch and gable is almost identical. The high pitch of the arch, and the inclination of the gable on both sarcophagi present strong contrasts to all the other three-niche examples with their very low segmental arches. The ends of both are sculptured, although treated in unarchitectural fashion, with a Medusa head and cornucopia on the Ludovisi marble, and a griffin [1] on the Lanuvium sarcophagus.

When we look at the figures the comparison is further borne out. Again the proportions are the same. Barring the modern heads of the Ludovisi women who, in spite of their obviously female garments, have been restored as men, both groups are in poses almost identical to the corresponding groups on the other sarcophagus. The wife rests her right elbow in her left hand and stands in exactly the same posture on both sarcophagi, while her attendant is also in the same pose and holds her right arm vertically across her body carrying a pyxis or box in the same way. Slight variations occur in the fall of the drapery, but that is all. The husband and his follower likewise show the same phenomenon. The latter is turning towards his master with upraised arm, while the man himself, calm and dignified, is in a frontal pose and holds a rotulus. His right hand, now lost on the Lanuvium sarcophagus, seems to have been originally in the same position as on the Ludovisi marble. His left hand, however, is stretched out from his body in the former example, but rests against it in the latter. Aside from this slight detail and the more voluminous and longer toga of the Lanuvium figure the arrangement and costume are exactly the same. The garment is crossed over the breast, and falls, making two short loops from the shoulder, a shorter, and a longer one that reaches beneath the knee, while it hangs free from the left arm. Even the incidental folds are strikingly alike. If we look elsewhere for similar portrait groups we find a great variety in pose and arrangement, but only on

[1] The symbolic meaning of the griffin guarding the tomb has been explained by R. Brown in *Archaeologia*, XLVIII, 2, 1885, p. 369. Two griffins facing each other are more common than the single eagle griffin, although this appears, as at Lanuvium, on two frieze sarcophagi, the one recently acquired by the Museum at Cleveland, *Bull. Cleveland Mus.*, 15, no. 4, April 1928, p. 86 and one at Pisa, Robert III, 1, pl. XV, 53; on a strigil sarcophagus also at Pisa, Lasinio, *op. cit.*, pl. IV, no. XXII, and a five-arch sarcophagus at S. Pietro near Ferentillo, Rodenwaldt, *op. cit.*, p. 23. It continues on the ends of Christian sarcophagi at Nîmes, LeBlant, *Les sarcophages chrétiens de la Gaule*, pl. XXVIII, 2; at Leyden, Garrucci, 319, 4, Wilpert, *Röm. Quart.*, XX, 1906, pl. II, figs. 1, 2; at Arles, LeBlant, *Arles*, p. 8, pl. IV.

FIGURE 8. SARCOPHAGUS AT CONCORDIA

the Concordia sarcophagus (Fig. 8) is there a comparable group.[1] This much mutilated monument shows essentially the same figures, although the wife is gone and only the attendant with her box remains of that pair.

The differences that exist between the Lanuvium sarcophagus on the one hand, and the Ludovisi and Concordia examples on the other, are slight when compared with these resemblances. The ornament of the Lanuvium example is simpler, as the tight foliation of the archivolts has been replaced by a single moulding. Plain archivolts, however, are not unknown in the Asiatic series, as they occur on the three examples at Bari, Tyre and New York respec-

FIGURE 9. FRAGMENT OF A SARCOPHAGUS AT KNIN

tively.[2] The difference in the base of the columns is not significant, I believe, as we find bases similar to those of Lanuvium on the Asiatic sarcophagi of Selefkeh, Sidamara, and the Colonna Gardens, Rome.[3] While the foliate spandrels of the Ludovisi type are the more common form, animals comparable to those of Lanuvium appear on the sarcophagi of Melfi and the Cook Collection in Richmond.[4] The variation in the type of capital will be dealt with more

[1] The sarcophagus with three aediculae of the Vatican Belvedere, Amelung, II. taf. 17, no. 60, approaches our type most nearly in the figure of the husband. The formula for the wife is totally different. The man, a stout, bald-headed figure, holds a scroll and stands in much the same pose as on the Lanuvium sarcophagus, but his right hand is raised in the gesture of speaking. His toga also is both shorter and fuller and is draped differently, while his attendant resembles our form only in the fact that he is looking at his master. Hymenaeus with the torch below is also a feature not found at Lanuvium.

[2] Morey, ills. 79, 91, and 81; also Stohlman, *A.J.A.*, XXV, 1921, p. 223, figs. 1 and 8.

[3] Morey, ills. 61, 62, 65, and 55.

[4] *Ibid.*, ills. 39, 40, 41, and 44.

fully below, but both are, I believe, eastern in origin. The Ludovisi and Concordia sarcophagi show the capital characteristic of the Sidamara type,[1] *i.e.* a Corinthian capital where the volutes have become four spirals. These are equated and parallel, and form a straight band across the upper section of the bell, while acanthus

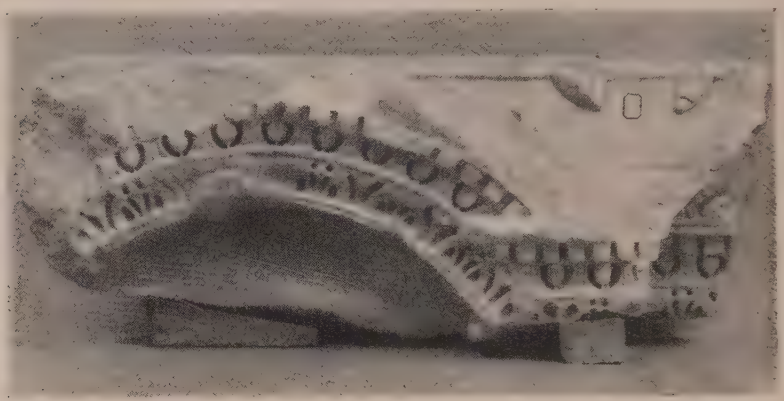


FIGURE 10. FRAGMENT OF A SARCOPHAGUS FROM SARDIS IN THE MUSEUM OF PRINCETON UNIVERSITY

leaves treated with the coloristic Sidamara technique cover the lower half. As a rule, especially in the third century,[2] the capital has a

[1] This characteristic capital is found on a small fragment at Knin in Dalmatia, added to the Asiatic group by Strzygowski, *Art Bulletin*, VII, 1924, pp. 71, 72 to whom and to Mr. Morey I am indebted for the accompanying photograph, (Fig. 9). It is exceedingly small, 0.24 m. x 0.17 m., and must consequently have belonged to a child's sarcophagus. A fragmentary second arch appears at the left, not a gable as described by Professor Strzygowski. The sarcophagus must, therefore, have been of the five-arch type and, whether we have a section of the front or of one end, it is unique in the use of dentils and impost blocks with a five-arch composition. The arches are low pitched and the archivolts continue horizontally across the tops of the capitals, a Lydian usage found on examples in the Vatican, Pigna and in the Borghese (Morey, ills. 82, 85–86), two early Asiatic sarcophagi. The technique of the Knin fragment is far closer, however, to that of a fragment in Berlin (Morey, ill. 80), which has been dated in the second half of the third century. Possibly slightly earlier than this because of its retention of the continuous archivolt, the Knin fragment seems to be of about the middle of the third century. Other fragments of an Asiatic sarcophagus have turned up since Mr. Morey's book was written, at Kalè Kapu; Moretti, *Annuario d. R. Scuola Arch. d. Atene*, VI–VII, 1926, pp. 486 ff., and a fragment coming from Sardis is now in the Museum of Princeton University. This consists of part of an arch and the beginning of a gable (Fig. 10). It is 0.57 m. x 0.20 m., and is much injured. The spandrel filling has been broken away completely, and a band which seems to have been the palmette ornament above the dentils of the archivolt. The dentils, egg and dart, and Lesbian cymation remain, however, and these show the Lydian technique. As the arch is without a conch, as on Rome B and Myra (Morey, ills. 53 and 42), the fragment could not have come from the sarcophagus of Claudia Antonia Sabina. It might, however, have belonged to the other sarcophagus from Sardis, of which there is a fragment in the Louvre (Morey, ill. 60) for, as far as one can judge, the proportions and technique of the two fragments seem the same.

[2] Morey, *op. cit.*, plates.

wide flare, in contrast to western forms. This same flare is found to a marked degree on the Lanuvium capitals, where we have not, to be sure, the double volutes, but a motive equally eastern, the saw-tooth acanthus leaf in its Lydian form.

The Ludovisi and Concordia sarcophagi have been accepted [1] as of eastern manufacture because of the form of their capitals and the Sidamara technique of the foliate filling of the spandrels and archivolt bands. This may be true, for they certainly show many close resemblances to the eastern group. On the other hand, they were as certainly produced for the western market. The appearance of portrait groups, the husband and wife joined in the *manuum junctio* in the centre of the front are adaptations to Roman taste, entirely foreign to eastern ateliers. The unarchitectural treatment of the ends, and the fact that on the Ludovisi sarcophagus the fourth side is left uncarved, are again modifications to suit western use and demand. Finally the parapetasma,[2] clearly visible behind the central figures on the Ludovisi example, is a western feature alien to the east. In like fashion the sculptor of our sarcophagus at Lanuvium, while showing many Oriental traits, has modified his composition. The portrait groups are the same as on our other two sarcophagi but, instead of the marriage pair, another western tradition has been followed and the tomb portal appears in the centre.

We are safe, I believe, in classing all three sarcophagi together as the products probably of the same atelier, or at least as showing the same phenomenon, viz., eastern workmen employing their own technique but adapting their composition to the demands of the western market.

The problem that now lies before us is the origin of the capital. This is of a peculiar form, as will be seen from Figure 11. The decided flare of the profile has already been mentioned as well as the acanthus leaves, which show the large and symmetrical saw-tooth cutting of the Lydian technique. Volutes of the Corinthian form are suggested, but we clearly have not the double volutes of Asiatic practice.

This capital is in stronger contrast to the common western usage. A richly decorated capital is rare on small monuments of Roman art. When a capital is carved in detail it is almost invariably covered with spoon-shaped leaves of plain outline. It is thus found on the the Conservatori sarcophagus (Fig. 5) and on at least sixteen other western examples.[3] On the other hand, capitals comparable to ours

[1] Stohlman, *op. cit.*, pp. 230–231; Morey, pp. 51–52.

[2] Morey, p. 56.

[3] The sarcophagi listed on page 422 note 2; the Belvedere and Copenhagen sarcophagi listed on page 421, note 2; two sarcophagi at Tipasa, Gsell, *École Française*

appear on a small number of sarcophagi, all of which have some connection with the east.

A form with a large flare and a similar sharp cutting of the leaves is found on a sarcophagus at Aphrodisias in Asia Minor, which was drawn and reproduced by Laborde [1] (Fig. 11). Showing much less of a flare, but also obviously derived from the Lydian capital, is the form found on the five-niche sarcophagus in the Musée Alaoui from Ste.-Marie-du-Zit.[2] (Fig. 11). Here again we see a single pair of volutes and saw-tooth leaves, although they are not as deeply undercut as in the Lydian examples. Their form, however, is essentially the same and the capital presents a similar phenomenon to that of Lanuvium. The African sarcophagus has already been classed with the Concordia and Ludovisi examples principally because of the

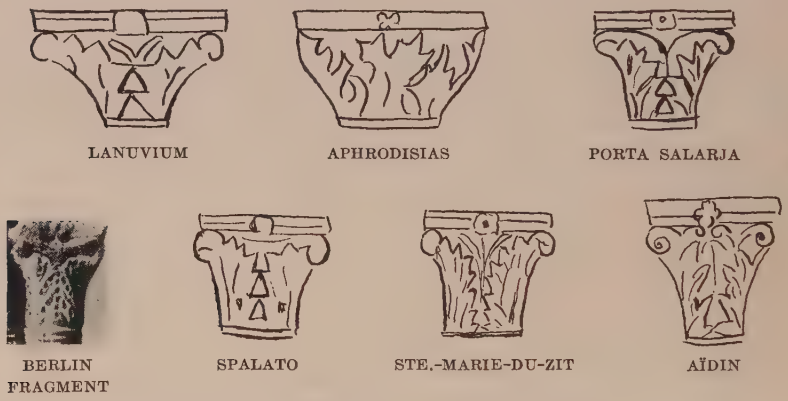


FIGURE 11. COMPARATIVE CHART OF CAPITALS

Sidamara technique of the foliation of the spandrels, but it likewise presents western subjects in the four seasons, one of which is identified with the Good Shepherd type. From this figure, which clasps both feet of the lamb in fourth-century fashion, from the change in capital, and from the awkward shift in scale between the lateral figures and the central group of graces, the monument has been dated in the first half of the fourth century.[3]

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de Rome, Mélanges, 1894, p. 445, pls. VI and IX; an example each in the Villa Albani, Zoëga, *Bassirilievi*, II, p. 295, no. LXXXVII, the Villa Mattei, Robert III, 2, pl. LXI, no. 192, S. Pietro near Ferentillo, Rodenwaldt, *op. cit.*, abb. 10, the Lateran Museum, Marucchi, *Museo Cristiano del Laterano*, pl. XVI, 1, the Vatican, Chiaramonti, Amelung, I, taf. 82; and two at Pisa, Rodenwaldt, abb. 5 and p. 25, no. 2.

[1] Laborde, *Asie Mineure*, p. 99, pl. LVI, 115; Reinach, *Reliefs*, II, p. 100.

[2] *Musées de l'Algérie*, XV; *Musée Alaoui, Tunis, suppl.*, no. 1115, pl. XLVI, 1; Morey, ill. 95.

[3] Morey, pp. 52–53.

Approximately of the same date is the Salona sarcophagus, now in the Museum at Spalato [1] (Fig. 12). Jelic, from archaeological data, has placed this about 325, a date that is borne out by the proportions of the figures, their squat and unclassical form and the variation in scale between the groups, possibly intended for children, and the husband and wife. These small figures are strangely like the small fourth-century reliefs on the Arch of Constantine.[2] Finally the theme of the "Good Shepherd" in the centre is a late one although not necessarily Christian. The capitals here are of much the same form as on our last example. They also have a slight flare and show the same zigzag cutting of the leaves, although at a wider interval. The architectural arrangement found on the front of the

FIGURE 12. SARCOPHAGUS IN THE MUSEUM AT SPALATO

Spalato sarcophagus is apparently a combination of two eastern traditions, the type with an undivided figure frieze under a horizontal entablature [3] and the three-niche type with a central gable that we have already considered. This double form is continued on a group of sarcophagi found in Northern Italy,[4] on which figures are gradually less and less employed, until we find in the Christian

[1] Jelic, *Röm. Quart.*, V, 1891, pls. III–IV; Garrucci, V, 299, 1; Wulff, *Altchristliche und byzantinische Kunst*, I, abb. 167.

[2] Strong, *Roman Sculpture*, pl. CIII.

[3] This is Mr. Morey's type B with examples in Athens, Naples and Rome; Morey, pp. 43–46. It continues among the Christian sarcophagi of Ravenna in twelve examples, the most famous of which are those pictured in Wulff, *op. cit.*, taf. XIII and abb. 173, 175, 176; see also Dütschke, *Ravennatische Studien*.

[4] At Ferrara, Mus. dell' Università, photo. Emilia Bologna, no. 6409, Rodenwaldt, *Zeitschrift für Bild. Kunst*, 57, 1922, p. 119; two at Milan, Mus. Arch., *Revue Arch.*, 1916, 1, p. 65, fig. 36; p. 64, fig. 35; Modena, Mus. Lapidario, Venturi, *Storia dell'Arte Italiana*, I, fig. 217.

sarcophagi of Ravenna this composition with solely ornamental motifs filling the aediculae.[1]

The tomb found at the Porta Salaria in Rome[2] (Fig. 13) was originally, I believe, of the same type before it came into the hands of a modern restorer. The architectural background, with its twisted columns placed upon bases, its Lydian leaf capital and gabled aedicula, shows clearly the type from which came such members of the Ravenna group as the Honorius sarcophagus[3] in the tomb of Galla Placidia. The capital, it will be noted, is extremely close in

FIGURE 13. SARCOPHAGUS FOUND AT THE PORTA SALARIA, ROME

technique to that of Lanuvium, and might be described as almost identical except for its more upright profile. Originally, I believe, the Porta Salaria sarcophagus also had lateral arches, since one can see even in the photograph a difference in texture and the absence of the grain of the marble where these should have stood. Upon examination, parallel strokes of a chisel all around the figures become

[1] Ravenna, Galla Placidia, Garrucci, V, 356, 1, Dütschke, *op. cit.*, abb. 2; S. Apollinare in Classe. Venturi, I, fig. 218, Dütschke, p. 76, and Garrucci, V, 392, 1, Dütschke, abb. 31.

[2] As far as I can discover, this sarcophagus is unpublished. Of its present location I am ignorant.

[3] Garrucci, V, 356, 1–3; Dütschke, *op. cit.*, abb. 2.

visible. The figures themselves correspond closely with the husband and wife of the Spalato sarcophagus except that the proportions here are a little less squat. The woman holds her drapery fold in Asiatic fashion,[1] and the man an unrolled scroll, but their heads, I believe, have been recut.[2] Something also has been cut away from the central space under the gable, and here again one sees the fine chisel marks.

The Berlin fragment [3] (Fig. 11), probably dating from about 400, the latest of all the Asiatic sarcophagi, and so far our only Christian example, indicates the final development of the type of capital found at Lanuvium, although this seems originally to have come

FIGURE 14. AMBON FROM AÏDIN IN THE MUSEUM, CONSTANTINOPLE

from a composite rather than a Corinthian form. Here the leaves have been drawn together as contours tend to close in, and the bell has lost its spread, but the acanthus has the same saw-tooth cutting and Lydian character, although done here with a drill and not a chisel as on our Lanuvium example.

A slightly earlier treatment is found in the capital on the ambon, probably dating from the fourth century, from the region of Aïdin

[1] Morey, ill. 108, type 4 and p. 60.

[2] The heads look extremely modern, but it is almost impossible to judge from a photograph alone.

[3] Morey, ill. 25 and p. 30, where further bibliography is given.

near Tralles, now in the Museum[1] of Constantinople (Fig. 14). We see here a chiselled leaf and symmetrical arrangement.

This eastern line of development on the one hand, with the divergent tradition of the Roman work on the other, establishes our capital without a doubt as the product of an eastern atelier. Its wide flare indicates, I believe, a date not far from A.D. 300 for the sarcophagus. The fact, however, that it is no longer the traditional form with double volutes, and that it apparently was used in the same ateliers which executed the capitals with Sidamara technique of the Concordia and Ludovisi examples, would point to a late period and consequently greater freedom. We can, however, by comparison with the Ludovisi sarcophagus arrive more certainly at a date. Much has been written about the date of this sarcophagus,[2] and from the coiffure of the wife, the hair and beard of the husband, both third-century types, as well as the form of DEPOSSIO in the inscription, I think we are safe in placing it at the end of that century.

The sarcophagus at Lanuvium is simpler in ornament and slightly cruder in style than the Ludovisi sarcophagus, and, although close enough to warrant the assumption that both were made in the same atelier, it seems somewhat later in date. It might thus have been made at the end of the third or in the first years of the fourth century.

MARION LAWRENCE

BRYN MAWR COLLEGE

[1] Mendel, *Catalogue des Sculptures Grecques, Romaines et Byzantines*, Constantinople, II, p. 409, no. 645.

[2] This is summarized by Morey, p. 52.

Archaeological
Institute
of America

TWO KYLIKES IN PROVIDENCE

The two vases which form the subject of this paper were both acquired by the Rhode Island School of Design in Providence in the autumn of 1925, by purchase through an appropriation to which a special gift was added. Fragmentary as they are, they can be attributed to their painters, and are a desirable addition to the collection.

The earlier vase of the two (Figs. 1–4) is an eye-kylix of the beginning of the red-figured style. It has been mended from many

Figure 1. Cup by Oltos—Form

fragments, and the foot is modern. This has involved the loss of most of the inner design: but the exterior is practically entirely preserved. The dimensions are: height as restored, .13 m., diameter, .332 m. (from handle to handle, .41 m.), and depth of bowl, .07 m. The vase distinctly recalls the black-figured shape in its depth as compared to the later examples, and the impression of solidity and strength rather than of elegance and beauty that it conveys.

The interior, as stated above, is largely lost, but it consisted of a warrior and horse facing the right (Fig. 2). Of the warrior, only the helmet, feet, and lower legs remain. The helmet appears to be of the so-called "Corinthian" type, with a high, full crest. Of the horse, the head, both hind feet, and one forefoot are preserved, with the tip of the tail. The mane of the horse is closely hogged, the forelock having a pronounced droop in front. Both the helmet of

the warrior and the mane and forelock of the horse are valuable indications in attributing the vase to its painter.

The obverse of the exterior shows, between palmettes, a youth, facing the right, anointing himself with oil. This side of the vase is completely preserved (Fig. 3). He is nude, with his arms outstretched, holding an aryballos in his right hand, slightly tilted, while his left hand is open, palm up, to catch the drops of oil from it. He is stockily built, with a head rather large for his body, and with powerful shoulders and thighs. On his head he wears a garland.

FIGURE 2. CUP BY OLTOS—INTERIOR

The outline of the head is rendered by an incised pattern picked out in white—an early sign, the reserve-space technique not being employed, although the use of raised lines for the outlines of the body and for details of anatomy, where such are given, is elsewhere prevalent. Of the palmettes, the one at the left has eleven petals, that at the right only ten. The stems of the palmettes are bent upward to form the brows for the prophylactic eyes next the handles.

The reverse of the exterior (Fig. 4) is less well preserved, but the central figure remains. Between palmettes, we see a youth, walking to the left, carrying a wine-skin on his shoulder. He wears a loincloth, striped at the top and bottom, but is otherwise nude, and bends forward under his load. Like the youth on side A, he also

wears a garland on his head. The outline of his head is treated in the same way as on the other side. Of the palmettes, the one at the right is complete, and consists of eleven petals; that on the left is only partly preserved, the left side being gone. As in side A, the stems of the palmettes form the brows for the eyes next the handles.

The treatment of the palmettes and eyes on this vase is distinctly unusual, their positions being inverted. Normally, as is well known, the palmettes spring from the handles, and the figures are between the eyes.

There can be no doubt whatever as to the hand that painted this vase. Everything points to Oltos—the treatment of the warrior's helmet, the horse's mane and forelock, and the draughtsmanship

FIGURE 3. CUP BY OLTOS—EXTERIOR, A

of the figures on the exterior. It is one of those rare vases, that, though unsigned, has so many obvious traits that it fairly shouts the name of its painter. This is due in no small measure to the researches of Professor Beazley, who has made of Oltos a very living figure, with a style peculiarly his own, and has assigned eighty-two vases and fragments, mostly kylikes, to his hand.[1] In fact, this vase closely resembles one already attributed to him by Beazley, if, indeed, it is not the same vase. The description of the vase in question will be found in the *Attische Vasenmaler*, p. 13, no. 23. If, in the description of the interior, we substitute the word "Krieger" for "Jüngling" as written by Beazley, it would be the same in every

[1] *Attische Vasenmaler*, pp. 10-17; *V. A.*, pp. 7–12. Hoppin (*Handbook R. F. Vases*, II, pp. 247–262) assigns forty-seven vases to him, but puts a large number of fragments under one number.

detail, including the transposed eyes and palmettes. The cup described by Beazley is reported to be in the "Sammlung Ferrari." If, as I believe, this is the same vase, with a slight slip in description by Beazley, it would indicate one of two things: either that Ferrari's collection was dispersed at some time since the appearance of the *Attische Vasenmaler*, or that Ferrari is, or was, a dealer who sold his vases piece by piece. I incline to this latter view.

Now comes a more difficult problem. Granting that the vase is by Oltos, let us see if we can assign it to any definite period in his career. This involves a study of the entire work of Oltos, and of the origins of the Attic red-figured technique—a study in which the writer is at present engaged, and which will, it is hoped, appear

FIGURE 4. CUP BY OLTOS—EXTERIOR, B

elsewhere in the near future. Space does not permit anything but a summary sketch of the methods which must be employed and the conclusions which have been reached as regards this vase.

The question as to the invention of the red-figured technique is a very vexed one. The prevalent view would appear to point to the Andokides painter as the earliest to use this style, and consequently its discoverer; but, on the other hand, an opinion held by some scholars would assign the inauguration of the new method to the atelier of Nikosthenes. In a previous article[1] the writer has attempted to prove that Nikosthenes and Pamphaios had formed a partnership, with Pamphaios as the junior member of the firm—a conclusion largely reached on the basis of the significant fact that they employed

[1] *A.J.A.*, XXIX, 1925, pp. 38–52, and especially p. 46 ff.

the same painters. One of these painters, if Beazley's attributions, which are usually accepted, are correct, was Oltos, whom he describes as a pupil of the Andokides painter. This is a very attractive and tempting theory, but its weak point is that we cannot attribute to Oltos any vases signed by Andokides as potter.

Oltos was undoubtedly the first painter of red-figured vases to be employed by the firm of Nikosthenes and Pamphaios, and worked for them in the beginning of his red-figured career.[1] I see no reason to alter my statement made elsewhere[2] that he learned his trade in that workshop, as it is in no way inconsistent with Beazley's assertion that he was a pupil of the Andokides painter: for the fact that he uses the mixed technique shows him to have originally worked in the black-figured style,[3] and he could well have been sent by Nikosthenes to learn the new method of painting as an apprentice under the Andokides painter.

It is early in his career that Oltos adopts the καλός-name Memnon, which becomes virtually a signature with him. He begins using it as far back as on some of his eye-kylikes in the mixed technique, and it continues almost to the end of his activity. The appearance of this καλός-name on vases attributed to him, but signed by different potters leads us to a brief discussion of his later history.

If the attributions of Beazley be accepted, we are to believe that besides Nikosthenes and Pamphaios, Oltos painted for Chelis, Sikanos, Chachrylion, and, of course, Euxitheos, with whom, and with whom only, he signs in association. The evidence regarding Sikanos is based solely on a drawing of a lost vase[4] and seems too slender to be given very much weight in this investigation, and will consequently be ignored, although Beazley may well be right. For the connection with Chachrylion, also, a certain amount of doubt has been expressed, and Beazley's attributions have been questioned, and at least one denied, by Mrs. Elderkin,[5] on grounds that appear to have some weight. But the writer is inclined to support Beazley in believing that Oltos did have some connection with the establishment of Chachrylion, as it is indisputable that we can see at least three different hands at work on the signed vases, not including

[1] Fine as they are, the amphorae and stamnos decorated by him and signed by Pamphaios, must be put early in his career: first, because of their shapes, which are reminiscent of the black-figured style, and secondly because the subject of the stamnos, the contest of Herakles and Acheloos, is treated in a manner recalling the Halios Geron vases of the earlier technique.

[2] *A.J.A., loc. cit.*, pp. 49–50.

[3] The writer believes that it will not be impossible ultimately to assign to the hand of Oltos some of the vases in this style signed by Nikosthenes.

[4] Beazley, *Att. Vasenm.*, p. 12, no. 9; Hoppin, *R.F.*, II, p. 409.

[5] *Harvard Studies in Classical Philology*, XXXV, 1924, 75–136, especially pp. 84, 87–89, 116.

Euphronios, who signs in association with him. This fits in very well with the rest of our knowledge of the work of Oltos.

It is possible, through a study of the vases signed by the various potters named above, to arrive at a chronological sequence. Following Nikosthenes and Pamphaios, if the indications of style are correctly interpreted, comes Chelis. This potter signs one vase in the mixed technique, which is not unlike the work of Oltos[1] and is the only other user of the ἐποίησεν formula with whom Oltos is connected to make eye-kylikes. The vase signed by this man and attributed by Beazley to Oltos has the prophylactic eyes, but on one side only.[2] With Oltos in this atelier was associated the Hermaios painter, to whom is assigned the kylix in Munich signed by Chelis.[3] This is a very significant point, which should be borne in mind.

The connection of our painter with Chachrylion seems to follow that with Chelis,—if this connection be accepted as proven. It is the writer's belief that Oltos did work in that atelier, but he is inclined to agree with Mrs. Elderkin in denying to him the kylix in the Torlonia Collection.[4] Once more Oltos is in association with the Hermaios painter, to whom the Chachrylion kylix in Boston is very correctly attributed.[5] The connection of these two men both with Chelis and with Chachrylion suggests that the business of the former was absorbed by the latter, for the quality of the work of Chachrylion seems later. To this period the writer would assign the bulk of the extant vases attributed to Oltos, of the kylix shape, and particularly those with mythological scenes, especially the exploits of Herakles. At this point a new figure enters the scene, who is destined to eclipse them all, and who may perhaps be called a pupil of Oltos—Euphronios, whose connection with Chachrylion is attested by the famous kylix in Munich.[6]

We now come to what the writer believes to be the final stage of Oltos's career—his association with Euxitheos. It is only through the joint signatures of the two men that we know the name of our painter; while of the four extant vases signed by the potter, two are those signed jointly with Oltos, while a third (the amphora with

[1] Bibliothèque Nationale 335. Hoppin, *op. cit.*, I, pp. 188–189, no. 4*.

[2] Naples, Heydemann 2615, Hoppin, *op. cit.*, I, pp. 186–187, no. 3*; Beazley, *Att. Vasenm.*, p. 13, no. 25.

[3] Hoppin, *op. cit.*, I, pp. 184–185, no. 2*.

[4] Mrs. Elderkin, *op. cit.*, p. 89; Hoppin, *op. cit.*, I, pp. 170–171, no. 16*.

[5] Hoppin, *op. cit.*, I, p. 150, no. 4*. The fact that in the same tomb with this vase were found two vases by the same hand, signed by Hermaios as potter, one of which is now in the British Museum, and the other in Leningrad (Hoppin, II, Hermaios 2* and 4*) points strongly to a partnership between Chachrylion and Hermaios.

[6] For complete bibliography of this vase, see Hoppin, *op. cit.*, I, p. 390, Euphronios 7*.

Achilles and Briseis in the British Museum) is very properly attributed to him.[1] These three vases may be ranked as the finest produced by the artist: they are better than anything he has produced up to now, except possibly the three large vases which bear the signature of Pamphaios, and which must be regarded as early works. In modern parlance, this preponderance of his work in the establishment of Euxitheos, and the fact that he is the only person to sign jointly with him, points to his holding the position at least of foreman painter in that workshop.

The other vase which is believed to have the signature of Euxitheos as potter is a very fragmentary krater in the Louvre.[2] This Beazley gives to Euphronios; and if this is correct, once again these two artists are associated together, suggesting more convincingly than ever that the younger and greater of the two was the pupil of the older.

Here let us leave Oltos—we can at present trace his active life no further. He has reached the zenith of his career. At no time a great artist, he is, nevertheless, an industrious and conscientious worker, with a distinct style of his own, who must be classed with that small group of progressive pioneers who inaugurated the red-figured technique. If he is to be regarded as the teacher of Euphronios, this alone is sufficient cause to make his reputation secure. He never became head of an establishment of his own, but was a painter and decorator to the end.[3]

Besides this cup in Providence, the following vases in America have been attributed to him: an eye-kylix in Boston;[4] a kylix and a psykter in New York;[5] and fragments of vases in both museums, and in the collections of Bowdoin College and Johns Hopkins University, the latter being published and correctly attributed by David M. Robinson.[6] All are in the pure red-figured style. Earliest, and closest to our vase in date, stands the cup in Boston; most closely related to it in subject is the psykter in New York, several figures on which have a strong family resemblance to the youth oiling his body on side A of our vase. In describing the Boston cup in the original catalogue, Edward Robinson attributed it to Chelis:[7] and

[1] Hoppin, *op. cit.*, I, pp. 448–449, Euxitheos 1*; Beazley, *Att. Vasenm.*, p. 11, no. 3.

[2] Hoppin, I, p. 450, no. 2*; Beazley, *op. cit.*, p. 59, no. 1. Of the signature, only the last letters of the name remain.

[3] Unless the joint signature with Euxitheos indicates a partnership—which is unlikely, but not impossible.

[4] Acc. no. 13.83 (Robinson 393). Hoppin, II, p. 253, no. 9; Beazley, *Att. Vasenm.*, p. 13, no. 24.

[5] The kylix is acc. no. 21.88.174, Beazley, p. 15, no. 46; the psykter is acc. no. 10.210.18, Beazley, p. 11, no. 5.

[6] In *A.J.A.*, XXI, 1917, pp. 159–168.

[7] On p. 143, no. 393.

the writer believes that it was undoubtedly made in that atelier. It would appear to be slightly earlier in date than the vase signed by Chelis and attributed to Oltos, with which the Providence vase seems to be approximately contemporaneous. It is therefore the opinion of the writer that the kylix here published was painted by Oltos when he was employed by Chelis, and that the signatures to be supplied should be, Χέλις ἐποίεσεν, Ὄλτος ἔγραφσεν.

The second kylix (Figs. 5–7) in Providence to be described here is in very fragmentary condition. The foot and a large part of the centre are modern, almost nothing of the interior being preserved. This suggests the possibility of the original of this part of the cup being in existence in some other collection. Of the rest, much is

FIGURE 5. CUP BY EPIKTETOS—FORM

missing, half of each of the handles being restored. Enough is preserved, however, to render it possible to reconstruct it in a satisfactory manner. The dimensions are: height as restored, .13 m., diameter, .30 m. (from handle to handle, .374 m.), and depth of bowl, .048 m. These last dimensions are essentially the original ones, as the fragments give us practically all of the circumference, and the curve of the bowl is sufficiently indicated to make the restoration of the depth certain.

The interior design was originally larger than the usual type, as is shown by a small bit of the inner circle which set it off from the rest of the cup. All of the picture that is left, however, are the feet, lower legs and tip of the tail of a silen, and above, a little bit of detail, so small as to be unrecognizable. In the field, above, is the inscription HO ΓAIS; below, by the feet of the silen, KAVOS.

The obverse of the exterior (Fig. 6) is very poorly preserved. At the left, a Maenad advances towards the right, looking backwards. She brandishes a thyrsos in her right hand; her left hand is on her hip. She wears a long chiton with sleeves reaching to the elbows, and a himation, and her hair is almost entirely concealed by the sakkos which she wears on her head. In front of her a silen, nude, with a garland on his head, moves to the right, a wineskin in his left hand, a horn in his right. He is partly bald, with a heavy beard and slight moustache, and his hair falls down on his shoulder in long corkscrew ringlets. In the field, between him and the Maenad,

FIGURE 6. CUP BY EPIKTETOS—EXTERIOR, DETAIL OF SIDE A

KAΛOS. Then come the arm, hand, ankle and part of the foot of another Maenad, holding a horn, while in the field a vine is portrayed, the bunches of grapes picked out in white, the leaves in red. The presence of the vine suggests that this missing figure may not be a Maenad, but Dionysos himself, not enough being left of the figure to indicate the sex. Finally, at the extreme right, a dancing silen appears, back to the front, with a horn in his left hand, and his right arm raised.

The reverse (Fig. 7) shows at the extreme left a nude silen, slightly ithyphallic, with arms outstretched, moving to the right in pursuit of a Maenad, who thrusts out at him with her right hand, and carries

a thyrsos in her left. Only her upper body and head are preserved, but enough to show that she is dressed exactly as the Maenad on the obverse, except that around the sakkos on her head is a garland. She looks to the left, toward the silen. In the field between them, KA]ΛOS. At her right is another silen, nude, with a leopard-skin tied around his neck by the paws, and falling down his back. He is dancing: his right arm is outstretched, he holds a horn in his left hand, and wears a garland on his head. Only parts of the head and upper body are preserved. In the field at his left, between him and the Maenad described above, HO]ΓAIS K[AΛO]S. In the field to his right, KAΛOS. Then comes another Maenad, in a long chiton and short sleeved upper garment, and a leopard-skin tied round her

FIGURE 7. CUP BY EPIKTETOS—EXTERIOR, B

neck. Her arms are outstretched, and she dances at the silen, who is dancing at her. She wears no headdress: her hair (treated with fine lines in brown wash) is short and disheveled, and crowned with a garland. Behind her, at the extreme right, is a nude silen: only one hand, the lower body, upper legs and part of the tail are preserved.

The scenes on the exterior of this vase are composed in a vigorous and spirited manner, but the drawing of some of the individual figures could be improved. That, however, it is of later date than the first cup to be described is proven by its shape (Fig. 5), which is of the developed red-figured type, graceful and elegant. The absence of the use of any incised lines for details also points to a more certain knowledge of the possibilities of the red-figured technique.

But the vase is certainly of the severe style, and while later, is not very much so.

The assignment of this kylix to its proper hand is not as easy as in the case of the first cup. At first glance, the memory of the Bacchic revels depicted on the cups of Makron, especially the well-known one in Munich[1] leapt into the writer's mind: but a careful study and comparison of essential details shows conclusively that not only is it not by Makron, but that it must be regarded as earlier. The closest parallel to be found appears to be the kotyle in the British Museum, signed by Epiktetos as painter and Pistoxenos as potter.[2] On that vase, the costume worn by Dionysos is almost line for line the same as that worn by the Maenads on the Providence cup: the silens are drawn in much the same manner, and the hair, with its long corkscrew curls, is identical: the thyrsos is rendered in the same way, as is the vine with its bunches of grapes and leaves. The writer therefore inclines to the belief that this vase should be attributed to Epiktetos.

The biography of this famous painter is somewhat more involved than that of Oltos. Besides Pistoxenos, he is known to have painted vases for Hischylos, Nikosthenes and Pamphaios, and Python: and the evidence points strongly to his having at one time had an establishment of his own, as a vase exists in Athens, on which he uses both the ἐποίησεν and ἔγραψεν formulae. It would appear that his first vases were decorated for Hischylos. Four signatures with this potter are known, three of which are extant, while one has disappeared.[3] All are kylikes; the three whose locations are known are all in the mixed technique; the lost vase appears to have been pure red-figured. For Nikosthenes and Pamphaios he signs four vases, two for each member of the firm.[4] Of the two for Nikosthenes, one (in Würzburg) is an eye-kylix in the mixed technique; the other, a fragment, perhaps of a kantharos, is red-figured; while both of those signed for Pamphaios are red-figured kylikes. Whether Epiktetos and Oltos worked at the same time in that atelier is uncertain, but it is not improbable that they did.

The connection with Pistoxenos seems to have followed immedi-

[1] Hoppin, II, pp. 62–63, Hieron 14*. Compare also cups signed by Hieron in Berlin (2290: Hoppin 3*), Brussels (247: Hoppin 10*) and the Louvre (G144, G145: Hoppin 23* and 24*).

[2] Hoppin, I, pp. 318–319, Epiktetos 14*. The number in the British Museum is E139.

[3] The extant ones are British Museum E3 (Hoppin, Epiktetos 7*), Faina Coll., Orvieto 97 (Hoppin, Epiktetos 16*) and Leningrad 645 (Hoppin, Epiktetos 23*); the lost vase is Hoppin, Epiktetos 28*.

[4] For Nikosthenes: Odessa (Hoppin, Epiktetos 15*) and Würzburg (Hoppin, Epiktetos 26*); for Pamphaios: Berlin 2262 (Hoppin, Epiktetos 4*) and Louvre G5 (Hoppin, Epiktetos 19*).

ately after that with the Nikosthenes-Pamphaios concern, the technique of the kotyle with the joint signature more nearly approaching the earlier than the later vases. It is not likely that his connection with that potter was of long duration for the writer believes that his independent career begins very shortly afterwards. To this independent period belongs that charming series of cups and plates, of which Beazley so truly and wittily says,[1] "You cannot draw better, you can only draw differently." Finally, and probably last of all his extant work is the beautiful kylix in the British Museum, which Python signs as potter.[2] If this Python is the same man who was also potter for three vases with the signature of Douris,[3] this must certainly be regarded as the latest of Epiktetos's works, and shows either that he gave up business for himself, or that he took Python into partnership with him.

Our kylix in Providence surely antedates the period of Epiktetos's finest work, and it is equally surely later than the Nikosthenes-Pamphaios period. Its close resemblance to the kotyle in London justifies us to restore the signature, Πιστόχσενος ἐποίεσεν, Ἐπίκτετος ἔγραφσεν. This Epiktetos is a very different individual from what he later became—but in fundamentals he is the same.

Having reached this conclusion, the writer turned to his copy of Beazley's *Attissche Vasenmaler*, to compare his list of Epiktetos vases, and was gratified to find that here, too, a cup in the "Sammlung Ferrari," very similar in detail to our vase, is listed.[4] So that, as in the case of the Oltos vase, it is probable that this vase in Providence is identical with the Ferrari specimen.

It is hoped that in these pages the importance of these two kylikes for museum purposes is sufficiently indicated. Both belong to the early red-figured period; both can be attributed not only to their painters, who were outstanding masters in their craft, but if the writer's conclusions be accepted, to their potters as well. They are important, therefore, not merely for their excellence as examples of Greek vase-painting, but for the light which they throw on the economic aspects of the Athenian ceramic industry.

Addendum: Since the above pages were written, the writer has received the first part of *J.H.S.*, XLVII, 1927, with the brilliant article by J. D. Beazley on the Antimenes painter (pp. 63–92). The Oltos cup in Providence is there illustrated on p. 64, fig. 1 (as in the collection of Mr. E. P. Warren) with a reference to its position in the list of Oltos vases in *Att. Vasenm.* The writer is glad to note that his guess that the Providence and Ferrari vases are one and the same is thus confirmed and established as a fact.

Stephen B. Luce

Boston

[1] In *V.A.*, p. 18.
[2] British Museum E38; Hoppin, Epiktetos 10*.
[3] Hoppin, I, Douris 25*, 30*, and 31*, Louvre G121, Vienna Oest. Mus. 324 and 325 respectively.
[4] On p. 25, no. 12.

American School of
Classical Studies
at Athens

EXCAVATIONS IN THE ODEUM AT CORINTH, 1928[1]

PLATES V–VI

THE excavations in the Odeum, the site of which was established through exploratory trenches dug in 1907 and 1909, were begun last year, when the preserved portion of the cavea and the eastern half of the orchestra and the scene-building were laid bare. The results of last year's work were set forth by B. D. Meritt.[2] The entire struc-

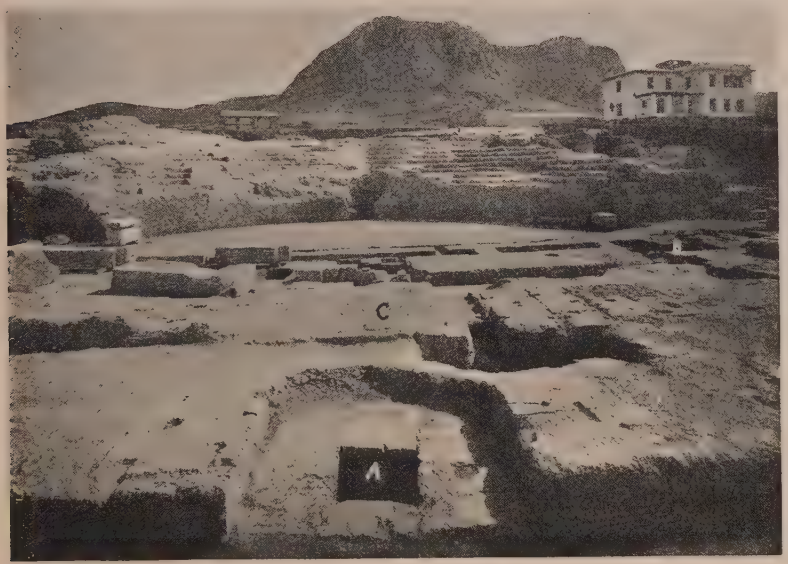


FIGURE 1. ODEUM FROM THE NORTH. NEW EXCAVATION HOUSE TO THE RIGHT

ture has now been cleared, so far as this can be done without disturbing too much the fallen parts of the building.

The most laborious part of the work consisted in clearing away the débris behind the cavea, where the fill reached the depth of over five metres. The entire region south of the Odeum in the direction of Glauce served in Greek and early Roman times as a stone quarry. This can best be seen round about Glauce,[3] where the stone has been cut away to a depth equal to the height of the fountain, and on top

[1] I am indebted to the Director of the American School in Athens, Dr. Rhys Carpenter, and to Professor W. B. Dinsmoor for valuable suggestions in the preparation of this report; also to Richard Stillwell, with whom I discussed the work during the progress of excavation and who also has prepared the plan of the building.

[2] *A.J.A.*, XXXI, 1927, pp. 450–461.

[3] *Cf.* B. H. Hill, *A.J.A.*, XXIX, 1925, p. 45.

of the rock-cut chambers are clear quarry marks, showing that the hill originally was higher than the top of the fountain. The Odeum is built on the north slope of this ledge of rock, where the stone is softer and hence could not be utilized as building material. On the south side of the cavea, where the rock was quarried away, a vertical scarp was left, in some places more than five metres high, running roughly east and west. This made it necessary to build up artificially the entire structure for the support of the upper rows of seats. The whole height of the building is nowhere preserved, but from the slope of the seats and the distance to the outer wall of the cavea it can be roughly calculated. The outer semicircular wall from the top of its foundation to the topmost seat must have been about eleven metres, and it probably extended some three or four metres above the seats.

Surrounding the cavea and separated from the outside only by the outer wall was a covered passage from which there was access to the upper rows of seats by means of a stairway at each end just south of the parodoi. At the east side this stairway was partly cut in rock and consequently is comparatively well preserved. Exactly how the cavea was entered cannot now be determined, but it is probable that the stairs led to a diazoma which has disappeared, together with the upper section of the cavea. The stairway on the west side, which had to be built up artificially because of the falling away of the rock, is less well preserved, but enough remains to show that it corresponded exactly to the one on the east side.[1]

The vaulted passage encircling the cavea varies between 1.75 and 2.05 m. in width, and in the one place where the vault is preserved *in situ* the height is a little less than 3 m. The walls wherever possible were cut out of the native rock, but where the rock fell away on the west side and where it had been quarried away all along on the south side the walls were built of large poros blocks laid in mortar and joined by dove-tail clamps. As in the walls of the scene-building, these clamps were of wood embedded in mortar. Among the hundreds of clamp holes visible there is in no case any trace of lead or iron, whereas mortar is always present. Where this has not been disturbed it is hollow inside where the wooden clamp has rotted away. This kind of clamp was used only for fastening the poros blocks of the walls; for the marble entablature in the scene-building leaded iron clamps were used.

The thickness of the outer semicircular wall is slightly over two metres, but the foundation projects about one metre toward the outside. This foundation consists of one layer of poros blocks,

[1] See B. D. Meritt, *A.J.A.*, 1927, p. 459.

(Fig. 2, A) not bound together with clamps, and resting on a core of very hard concrete, which extends down to solid rock. On both sides are traces of upright posts and flat planks used for supports when the foundation was laid (Fig. 2, C). The planks were sawn, *ca.* 0.044 m. in thickness, and the grain is so well preserved on the

FIGURE 2. FOUNDATION OF OUTER WALL OF CAVEA, WEST SIDE

face of the concrete that it is possible to tell that the planks were made of pine wood. At several points actual splinters of wood still adhere to the concrete, and in one case some mason's or lumber dealer's marks, written in red paint on the plank, are preserved. There are traces of three letters, the first of which is a *phi* and the second a *mu* or an *eta*. The upright posts, which were either square

or semicircular in cross section, were set at intervals of about 1 m. They were always on the inside with respect to the wall, and the planks were fastened by means of iron spikes on the outside of the posts. This shows that the wooden posts and planks were not intended to serve as forms for the concrete but were used for supporting the earth when the trenches were dug for the foundations of the walls. The wood could not be removed after the concrete had been poured, hence it was left to decay.

The outer wall has a series of pilasters (Fig. 2, B) projecting 0.11 m. from the face of the wall at intervals of about 3.60 m. How the wall was finished higher up cannot be definitely determined, but it is possible that a blind arcade rested directly on the pilasters. The

FIGURE 3. SOUTH SIDE OF ODEUM, SHOWING SUBSTRUCTURE OF CAVEA

total absence of pilaster capitals in the accumulated earth lends probability to this supposition. We have no way of telling whether there was a second covered passage directly above the existing one, but if that was the case there was probably an upper open arcade toward the outside. The architectural remains from this part of the building are so scanty that a restoration must be largely conjectural.

When the Odeum was built, the ground level on the south side of the cavea was considerably higher than the floor of the vaulted passage, so that the entire deposit had to be dug through for the foundations of the walls. But the floor of the passage itself (Fig. 3, B) was laid directly on this deposit and consists only of a thin layer of packed earth and mortar. In the southeast corner of the build-

ing at point C on the plan (Plate V) this fill under the floor of the passage was removed for a distance of about three metres. It contained numerous sherds of imported Arretine ware, some with stamps of well known makers, and several lamps and fragments of lamps of the Augustan period and somewhat later. Many of these are of the local wheel-made type,[1] others are early Roman relief lamps mostly of Loeschcke's types I and III.[2] Not a few belong to the "Ephesus" type,[3] which was common in Corinth in early Augustan times. Some fragments of earlier types, as well as potsherds of the Greek and Hellenistic periods, were found in the same fill, but such are found in almost every Roman deposit at Corinth. On the other hand, the types of lamp common in the second half of the first century and later were conspicuously absent. All the evidence points to the middle of the first century A.D. as the approximate date of this fill. As might be expected the earth outside the outer wall of the cavea contains the same kind of objects as that under the covered passage. In some places this earth was disturbed when the walls were broken up during the middle ages, but in the main it has been possible to trace the line of the trench cut through the early Roman deposit by the builders of the Odeum. The late fill, which began to accumulate after the disuse of the Odeum toward the end of the fourth century, can easily be recognized both by the potsherds —a late variety of terra sigillata often with stamped patterns—by the late Roman and early Christian lamps, and by the numerous coins, mostly from the late fourth century. The trench cut for the outer wall of the cavea was as much wider than the wall as the foundation projects on the outside, and the space above the projecting foundation was filled up by poros chips resulting from the dressing of the building blocks. The sherds from this fill are very few and those found are of the same kind as those from the earth outside the building. One almost complete lamp of the late wheel-made type came from this fill.

At point A on the plan a trench, 2 m. wide and 3 m. long, was dug outside the outer wall of the Odeum in order to show the foundation down to the bottom (Fig. 2). At this point close to the wall were discovered seventeen lamps and a number of small fragments. Two of the lamps (Fig. 4, nos. 2 and 6), which are complete, are imported Roman relief lamps of Loeschcke's type I, two broken specimens and a few fragments belong to the "Ephesus" type (Fig. 4, no. 1), the other thirteen are of the local wheel-made variety (Fig. 4, nos. 3 and

[1] *Cf. A.J.A.*, 1927, p. 329 ff.
[2] *Lampen aus Vindonissa*, pp. 24 and 34.
[3] *Cf.* Walters', *Br. Mus. Cat. of Lamps*, Nos. 326–349.

4). One fragment of an early Roman lamp with the figure of a horse and rider was found close to the rock bottom, showing that the Roman fill extended all the way down. On the bottom are

FIGURE 4. LAMPS FROM THE ODEUM

quarry marks (Fig. 2, D) near the vertical cut in the rock, which is here 5.50 m. high.

The vault over the semicircular passage is made of small undressed stones held together by mortar. At the west end of the passage, where there was probably a series of cross-vaults resting on piers (see plan and Fig. 5), the vaults seem to have been made of large well-fitted voussoirs, a number of which were discovered in the débris.

At the east end there are traces of mosaics on the vault of the passage, but these did not extend all through. Where the vault is preserved *in situ* and on the numerous fallen pieces from the rest of the passage there are no traces of mosaics, nor were any tesserae found in the earth underneath, as could hardly fail to be the case if the whole vault had been covered by mosaics. Apparently only that part of the passage adjoining the vaulted stairway on the east side was so decorated.

At point B on the plan there is a recess 1.93 m. wide and 0.88 m. deep in the inner wall of the vaulted passage. On the floor of this recess and immediately in front of it were discovered a great number

FIGURE 5. ODEUM FROM THE WEST, SHOWING VAULTED PASSAGE

of late Roman coins, a fact which seems to indicate that some kind of business was transacted at this place. Although the outer wall of the cavea is too poorly preserved to show whether there was an entrance on the south side into the vaulted passage, it is reasonable to infer that such was the case. That the passage is not merely structural, but was used for communication between the different parts of the cavea, is shown by the fact that it is cut through the solid rock at both ends. Since there are no traces of stairways except near the two parodoi, the only purpose that this encircling passage can have served must have been to permit spectators to enter the Odeum from the south without walking around to the east and west entrances. If we assume such an entrance into the passage on the

south side, the purpose of the recess in the wall becomes clear. The spectators going through the passage to the west stairway could secure tickets at this place before reaching the cavea. On the southeast side the walls of the passage are entirely removed, but it is not unlikely that there was a similar ticket office there for the spectators who mounted the stairway on the east side. A somewhat similar arrangement is known from the threatre at Herculaneum, where a great number of theatre tickets were found near one of the entrances,

FIGURE 6. ORCHESTRA OF ODEUM, SHOWING CURTAIN CHANNEL

showing that it was one of the places where admissions to the performances were procured.

On the south side of the cavea, where the rock was quarried away, a row of six short chambers covered with slanting vaults extend from the inner wall of the vaulted passage to the vertical cut of the rock. The supporting walls of these chambers have been largely removed like the rest of the walls of the Odeum, so that the concrete vaults have fallen down. These have all been left in the place where they fell, and the earth has only partially been removed from between them, but the two ends of the supporting cross-walls are visible in every case (Fig. 3, A). The chambers seem to be wholly structural and were probably not accessible when the building was standing. This can be inferred from the fact that in some of the chambers the early fill was not removed, except where trenches were dug for the

foundations of the walls, but was left at a height considerably above the floor of the vaulted passage.

Of the orchestra and the scene-building the western half has been cleared this year, and in the previously excavated portion supplementary digging has been done wherever it seemed necessary for an understanding of the building. Thus the underground passage discovered toward the end of last year's campaign has been cleared for a distance of 26 m. from the manhole at the north side of the scene-building (Fig. 1, A). The distance from this manhole to the south end of the passage in the middle of the orchestra measures about 20 m., making the total length 46 m. From the back of the scene-building to its south end the passage was cleared last year and has been described in Dr. Meritt's report. Besides the manhole in the orchestra (Fig. 6, A), which is close to the front wall of the scene-building, a smaller opening farther south (point D on the plan) leads from a narrow water channel (Fig. 6, B) into the underground passage. Since the floor of this water channel slopes perceptibly from both directions toward the middle, where it opens into the underground passage, it is evident that the latter received the water which collected in the narrow channel.[1] This channel and the opening into the underground passage seem too small for carrying off all the rain water from the Odeum, but the roof of the building must have thrown most of the water toward the outside, which would account for the apparent insufficiency of drainage. On the other hand, it is remarkable that so large a drain should have been made only to receive the small amount of water that could flow through this one narrow opening in the orchestra. Near the manhole north of the scene-building the underground passage measures 2.70 m. in height, *i.e.* more than a metre higher than would be necessary for a man of average height walking through upright. At the bottom the channel is about 0.50 m. narrower than at the top, and the difference is due to a bench-like projection on each side. These "benches" run at about the same level, *ca.* 1.20 m. below the roof of the passage, from the orchestra to the north side of the scene-building; whereas the bottom of the passage slopes 1 m. between the manhole in the orchestra and that north of the scene-building, a distance of less than 13 m. Furthermore, we find that the channel extending from the manhole just north of the scene-building toward the northeast is much lower and lacks the "benches" on the sides. Its height is about 1.40 m., or just enough to allow room for working conveniently

[1] The narrow semicircular channel (Fig. 6, C), mentioned in Dr. Meritt's report, is not a water channel, but was probably made for the insertion of marble slabs forming a balustrade round the orchestra.

when the passage was made. This seems to indicate that the original floor of the channel under the scene-building was at the level of the top of the "benches" and that the narrow lower part was made at a different period and for a different purpose. The fact that it runs exactly along the main axis of the building lends probability to the supposition that it was originally intended for something more than an ordinary drain. Underground passages used for the sudden appearance of actors on the scene are known from other ancient theatres,[1] and it is most probable that this was the original use of the passage under the Odeum. The purpose of the south end of the passage from the manhole under the stage to the middle of the orchestra, where it stops abruptly, a distance of *ca.* 6 m., is not clear. It may have been the intention to have another opening in the middle of the orchestra, but for some reason this was not carried out.

An examination of the steps cut in the sides of the manhole north of the scene-building leads to the conclusion that the passage did not originally extend farther to the north. The steps are cut in the rock, one row on each side of the manhole directly opposite each other. But on the one side the two lowest steps were apparently cut away when the channel toward the northeast was made, and two other steps were then made which do not come directly opposite the corresponding steps on the other side. Furthermore, the northeast part of the channel is much lower than that under the scene-building and winds about considerably. Its changes of levels have been explained by Dr. Meritt [2] on the ground that the digging of the passage was carried on from different manholes at the same time, and its winding course can probably be accounted for in the same way. At a distance of *ca.* 18 m. northeast of the manhole at the back of the scene-building there is another manhole directly under the modern road. It seems to have been used only for the making of the channel and was carefully covered by a slab which can be seen from below. About 8 m. beyond this point the channel was completely filled, so that it was necessary in order to reach it to sink a pit north of the modern road between the Odeum and the theatre. When the channel was reached it was discovered that its bottom here rises in a series of steps *ca.* 1.50 m., and from here toward the north it was cut so close to the surface of the rock as to be open on the top. Probably this part was intended to be covered with slabs. In order to follow the channel farther towards the north it would be necessary to dig

[1] Such passages are found in the theatres at Eretria and Magnesia. *Cf.* Bieber, *Theaterwesen im Altertum*, p. 20. The purpose of the underground passage in the theatre at Sicyon is less obvious.

[2] *Loc. cit.*, p. 458.

through an accumulation of earth about 6 m. in depth, hence it has not been cleared beyond this point. There can be no doubt that the whole northeast extension of the channel was left in a half-finished state. Although there is enough slope for the water to rise above the abrupt changes of level, since the top at the northernmost end is lower than the bottom under the orchestra, it is inconceivable that it was intended to be left in that condition. As a matter of fact, the water probably never reached to the northernmost end of the channel, for the rock through which it passes is so porous that the water would disappear sufficiently fast through it. This has been tested after heavy rains since the clearing of the passage under the orchestra and scene-building, and probably gives the clue to the unfinished state of the passage beyond this point. The "steps" at the north end are so high and irregular that they were certainly not intended as stairs, and where the level changes nearer the north wall of the Odeum there is an abrupt rise of *ca.* 1 m., both in the bottom and the top of the passage, so that it is difficult to walk past this place. There is, then, no reason for believing that the part of the channel from the manhole by the north wall of the stage building to its northernmost limit was intended for anything but a drain.

A study of the contents of the fill from the different openings into the passage proves that the northeast part was already filled up, while the part under the Odeum was still being used. In the northernmost opening a number of lamps were discovered dating from the second half of the first century A.D. and earlier. The most common type is that of the local wheel-made lamps which were in use as late as the end of the century. Numerous fragments belong to Loeschcke's type VIII,[1] which was the most common type of relief lamps in Corinth during the Flavian period. More important for the dating of the fill are some fragments of factory lamps, a type which was imported to Corinth only during the last quarter of the first century.[2] In the pit above the drain were found some later fragments, but those from the drain itself belong chiefly to the end of the century. Thus we may safely conclude that the northeast portion of the underground passage was filled not much later than 100 A.D.

The fill of the manhole in the orchestra and the small opening from the narrow drain can be accurately dated from the numerous coins, as well as from the fragments of lamps which it contained. The coins, which have all been cleaned and studied, are so important for

[1] *Op. cit.*, p. 49.

[2] For the dating of the factory lamps, see Loeschcke, *op. cit.*, p. 80, and Fremersdorf, *Römische Bildlampen*, p. 124.

the dating of the Odeum that it seems desirable to give the complete list:[1]

Hellenistic	4	Faustina the Elder	1
Julius Caesar	1	Marcus Aurelius	3
Augustus	2	Faustina the Younger	1
Claudius	1	Lucius Verus	3
Galba	1	Commodus	4
Domitian	1	Septimius Severus	3
Trajan	2	Julia Domna	1
Hadrian	7	Geta	1
Antoninus Pius	7	Alexander Severus	1

The dates of the lamps found in the same fill agree perfectly with those of the coins. A few fragments are from lamps of the first century like those discussed above, but the great majority belongs to a type which developed in Corinth in the beginning of the second century A.D. and continued in use for about a hundred years. Numerous fragments of marble, architectural members and pieces of sculpture, which came out of the same fill, all show signs of having been in fire, and quantities of carbonized wood and ash were mixed with the earth.

When the underground passage was first discovered there was nothing visible in the orchestra to betray its existence. Both the manhole and the small opening from the drain were completely filled, and the later orchestra floor extended over them. Had the manhole north of the scene-building been likewise covered over, the passage would in all probability never have been discovered. After this had been found, however, it became clear that the late floor of the orchestra concealed considerable remains from an earlier construction of the Odeum, which have now been uncovered.

At a distance of 3.10 m. south of the broad wall, on which rested the *scenae frons*, a channel, 0.88 m. wide and *ca.* 0.38 m. deep, runs across the entire width of the orchestra. In the south wall of this channel, at intervals of 2.68 m., are narrow cuttings (Fig. 6, D) extending into the rock below the bottom of the wall in some cases as much as 0.70 m. These cuttings were probably made for the insertion of upright wooden posts by which the stage curtain was supported. At the west end of the stage there seems to have been a small room under the stage floor (Fig. 1, B), from which there is

[1] This list includes all the coins from the fill under the manhole in the orchestra and the small hole from the narrow drain at point D on the plan, but not those from the manhole north of the scene-building which may have been filled up at a slightly later date.

I am indebted to Dr. Katharine M. Edwards for furnishing me with this list, as well as for information about the other coins from the Odeum, of which she has made a catalogue.

access into the curtain channel, probably for the use of the stage hands who raised and lowered the curtain. Similar arrangements are found in other Roman theatres, *e.g.* the Odeum of Herodes Atticus in Athens, the large theatre at Pompeii, and the theatres at Syracuse and Timgad.

The channel was filled to the top of its walls with broken tiles, numerous fragments of marble, ash, and carbonized matter. The marble is largely calcined, and even the poros walls of the channel have crumbled away at the upper edges from the intense heat of the fire which at one time completely destroyed the stage. Among the marble pieces well enough preserved to show their original shapes are several fragments of a Roman statue which will be discussed below. Numerous marble mouldings, fluted pieces of pilasters, and thin slabs of various kinds of colored stones were probably used for decoration of the stage and the *scenae frons*, which were destroyed by fire. The coins and fragments of lamps from this channel date this fill in the same period as that in the underground passage.

The walls of the curtain channel are made of well fitted blocks, nearly all of which show signs of having been re-used. Most of them are covered with fine stucco, which in some cases is on the side towards the channel, in others towards the outside. On one of these blocks is preserved part of a painting, a standing figure draped to the feet and holding a shield on the left side. Only the lower part from the knees down remains, but this is enough to show that the figure is that of Athena. Whether some of the other blocks are also painted cannot be ascertained without destroying a considerable part of the later orchestra floor. That the channel was made from re-used material is further indicated by mason's marks, some of which are turned upside down, and also by the fact that several of the blocks had along the edge a raised band like a taenia, which was removed when they were used in their present position. Another re-used poros block, found near the east end of the stage, has a Doric frieze and architrave in one piece. The metopes are painted white and have a border of red around the edges. On the architrave are some large Latin letters apparently cut through the thickness of the stucco so as to show on the stone underneath. The stucco has mostly disappeared and only three letters of the inscription remain. The first of these is S and the third F. Of the second letter only part of a vertical stroke remains. This is probably an I or a P, in which case the inscription would read either *Sua Impensa Fecit* or *Sua Pecunia Fecit*. The first letter comes at the very left side of the block, and after the F there are no traces of other letters, so that this seems to be the end of the inscription. The size of the letters—

0.15 m. high—and the fact that they are cut on an architrave block make it probable that they record the construction of the building to which the blocks belonged. Since other parts of the Odeum which are still in their original position were also once covered with stucco, it is most probable that the blocks in question belong to an earlier construction of the same building. On the piers that supported the vault on the west end of the vaulted passage and on the under side of the voussoirs of the same vault, the stucco is partly preserved. These remains indicate that at one period the walls of the Odeum were at least partly covered with painted stucco. It is important to bear in mind that some of those painted blocks were re-used for the building of a curtain channel which was completely covered by the later orchestra floor.

The western part of the scene-building corresponds in the main to the eastern part, which has been discussed in Dr. Meritt's report, but the walls at the west end are less well preserved. This is due to the fact that the floor of the western room was dug through in preparing for the foundations of a modern house, and apparently what remained of the walls of the Odeum at this point was then broken up for building material. Since only deep trenches and the lowest courses of stones remain to show the lines of the walls, it is impossible to tell how the rooms connected with one another. Nor has it been possible to show how the Odeum was entered from the west, since the excavations have not been carried beyond the west wall of the building. No trace of a stairway like that on the east side has been found, but it is probable that a road led to the western parodos.

From the north there was access into a vaulted corridor, 4.67 m. wide, which extended along the entire length of the building. The chief entrance was at the main axis of the Odeum through a portico projecting 2.50 m. from the north wall of the scene-building. The setting lines and dowel holes for four square pillars or plinths of columns are marked on the foundations of this portico, and on the north wall of the scene-building is a cutting for the threshold block (Fig. 1, C). Farther east is a smaller doorway, and there was probably a corresponding entrance on the west side where the wall has been removed. In the middle of the north portico is the opening to the manhole which leads to the underground passage (Fig. 1, A). The blocks round the opening have disappeared, so that it is not apparent how it was covered when not in use.

The north wall was originally built with a series of recesses, which at a later period were filled with rubble masonry so as to make the face of the wall straight, and marble slabs were added on the outside. At the same period a series of rooms adjoining this wall on the north

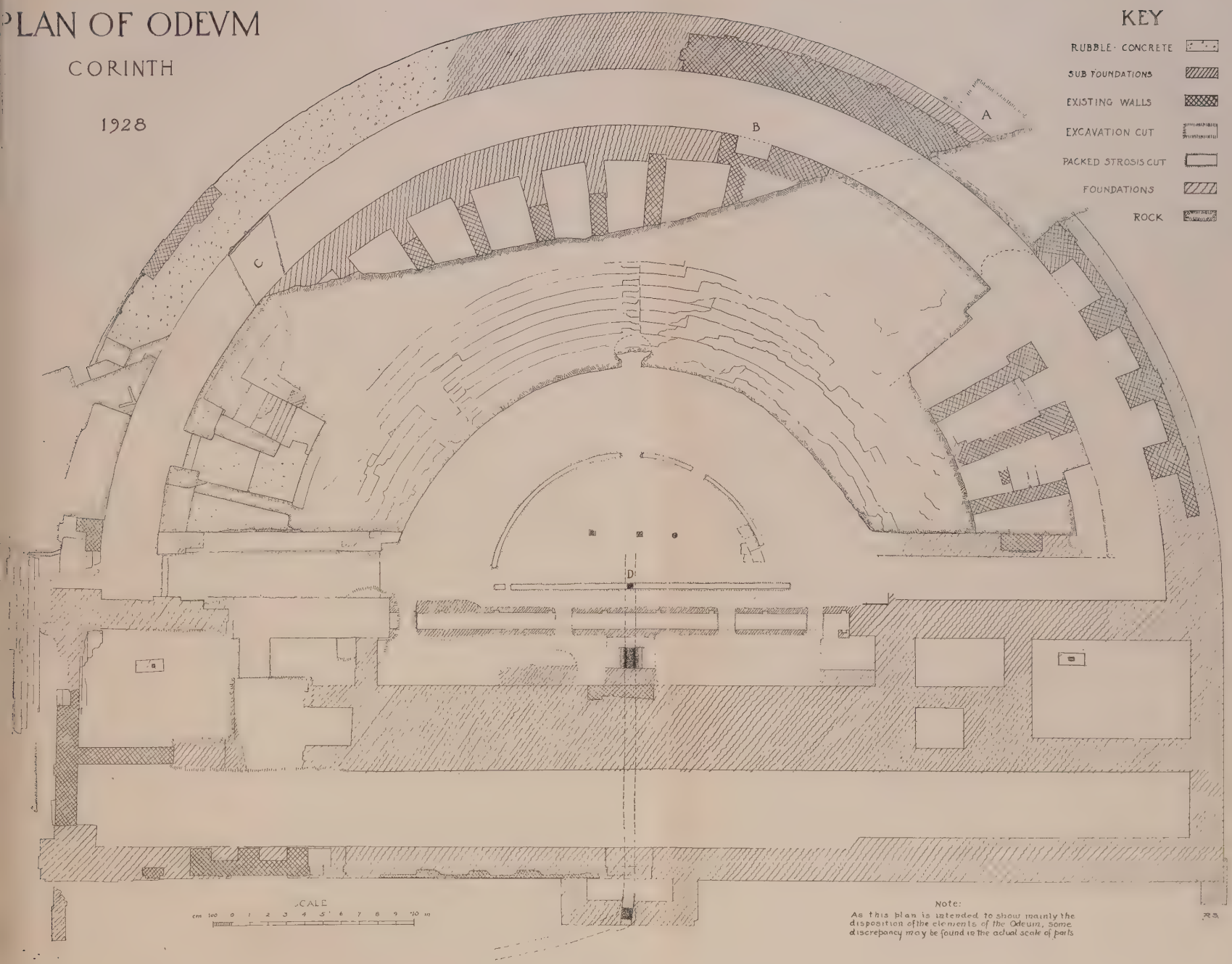

PLAN OF ODEVM
CORINTH
1928
KEY
RUBBLE · CONCRETE
SUB FOUNDATIONS
EXISTING WALLS
EXCAVATION CUT
PACKED STROSIS CUT
FOUNDATIONS
ROCK
A
B
C
D
SCALE
cm 100 0 1 2 3 4 5 6 7 8 9 10 m
Note:
As this plan is intended to show mainly the disposition of the elements of the Odeum, some discrepancy may be found in the actual scale of parts

PLATE V

side were added, the floors of which were also covered with marble slabs. In the manhole under the portico were found numerous fragments of marble veneer and mouldings very much like those from the fill of the curtain channel and the manhole in the orchestra. Unlike the latter, however, the fragments from the north manhole showed no signs of having been in fire, nor was there any other burned material in the fill. The rooms on the north side were probably made at the time when the building was revetted with marble. The fire which destroyed this marble revetment on the inside probably never reached the outer wall on the north side, the marble veneer of which was consequently left intact. When it was finally destroyed and used as fill in the north manhole is difficult to determine, because the coins from this fill are very few, but, since the underground passage could be of no use after it had been filled up under the orchestra, it is likely that the manhole under the north portico was also filled at about the same time as that under the stage; consequently the marble slabs which constituted the fill must have been taken down shortly after the fire. The two westernmost rooms along the north wall of the scene-building and one of the rooms toward the east had at one time mosaic floors with geometric patterns. The mosaics are very poor and were laid almost immediately on loose black earth. The tesserae are of white marble, black stone, and brick.

We can now sum up what can be learned from the building itself with regard to the different periods of construction, and with this compare what is known about it from ancient writers.

The only authors by whom the Odeum is mentioned in ancient literature are Pausanias [1] and Philostratus.[2] Pausanias calls it the ᾠδεῖον, but does not tell by whom it was built. The route which he followed in Corinth is now so well known through the identification of the Temple of Apollo, the Fountain of Glauce, and the large theatre that there can be no doubt that the building under discussion is the same as the Odeum of Pausanias. The building mentioned by Philostratus is not so easily identified, since he gives no indication of its site. He merely says that Herodes built (ἐδείματο) for the Corinthians a covered theatre which was only less magnificent than the one he built for the Athenians. It is hardly to be supposed, however, that Corinth had a third theatre in addition to the two already excavated and the Amphitheatre to the east of the city, so that it is highly probable that the covered theatre referred to by Philostratus is the building called the Odeum by Pausanias.

We know, then, that this building already existed at the time of

[1] Book II, 3, 6.
[2] *Vit. Sophist.*, II, 1, 9.

Pausanias' visit to Corinth. Exactly when this took place is not known, but since his fifth book was written in the year 174[1] the second book, containing the description of Corinth, must have been written considerably earlier. The fact that he does not say that Herodes built the Odeum may only be an omission on the part of the author, since he passes by other monuments erected by the same donor without any reference to his name. Yet there is a possibility that the name of Herodes Atticus had no connection with the Odeum at the time when the second book of Pausanias was written. We need not conclude from the statement in Philostratus that the building did not exist before the time of Herodes. The Greek words meaning "to build" are often loosely used by ancient authors,[2] and a thorough reconstruction of the Odeum may be all that ἐδείματο implies. In fact, this is the only view compatible with the actual remains of the building. The date of the fill close to the outer wall of the cavea and under the floor of the covered passage, the finds from the northeast part of the underground passage, and the re-used blocks in the curtain channel and elsewhere, all of which have been discussed above, point to the existence of the building in the first century A.D. It is inconceivable that no sherds of the second century or the late first century should be found in the undisturbed fill between the foundations of the walls on the south side, if the building had been erected for the first time by Herodes. The evidence of this fill indicates that the original building was constructed about the middle of the first century. To this period belong all the existing foundations as well as the underground passage from the orchestra to the north portico. Probably at a slightly later period this passage was converted into a drain and extended toward the northeast, but was not finished beyond the manhole under the portico. What the arrangement of the orchestra and the stage was at this early period we have no way of knowing, except that the order seems to have been Doric and that stucco was used for covering the walls and architectural members, while frescoes probably adorned the *scenae frons*.

The next period is that of the second century, when a thorough reconstruction took place. All the inside walls, the floors of the orchestra and the east room, and the seats of the cavea were covered with marble slabs; the stage was elaborately decorated with *opus sectile;* and columns of granite and many colored marble with Ionic and Corinthian capitals of white marble were used for the stage front. At this period the cavea and the stage were probably roofed

[1] *Cf.* Book V, 1, 2.

[2] Pausanias says in Book I, 19, 6, that Herodes Atticus ᾠκοδόμησε the Stadium in Athens, which we know was built by Lycurgus in the fourth century B.C.

over, and the orchestra may have been covered with a *velum* supported by wooden posts, for which four cuttings have been found on the orchestra floor (see plan). The stage extended from the curtain channel to the front of the broad wall on which rested the *scenae frons*. In this were probably niches for statues of which several fragments have been found in the fill covered by the later orchestra floor. The north façade of the building also underwent a great change at this period. Here rooms, whose floors and walls were covered with marble, were added, probably for the use of the public as bazars or as places for lounging. The mosaics covering the vault of the long corridor on the north side of the building (Fig. 7) and the

FIGURE 7. FRAGMENT OF MOSAIC FROM CEILING OF NORTH CORRIDOR

vault at the east end of the vaulted passage may also belong to the same reconstruction.

This second period is doubtless that of Herodes Atticus. Fortunately some of the débris after the fire by which this building was destroyed was packed down under the later floor of the orchestra, so that there was no chance of confusing it with the fill of the later period. Both the sculpture and the architectural fragments bear the characteristics of the Antonine period, and the coins and lamps from the same fill point to the same conclusion. Although coins of the first century and the early part of the second century, as well as a few from Hellenistic times, were found in the fill, the majority date from the time of Hadrian and later. If we assume that the recon-

struction of Herodes took place sometime during the reign of Marcus Aurelius, it is not unlikely that coins of Hadrian and Antoninus Pius were still in circulation.

The latest coin from the fill is one of Alexander Severus, whose reign began in the year 222, which marks the *terminus post quem* for the third period of the Odeum. Since only one of the coins belongs to Alexander's time, we are justified in assuming that the second reconstruction took place near the beginning of his reign. It is, of course, possible that some time elapsed between the fire which destroyed the Odeum of Herodes and the restoration that followed, but there are no indications that the building lay in ruins for any length of time. In the third period the Odeum was apparently changed from a covered theatre or music hall to an open arena. The space of the orchestra was more than doubled by cutting away the lower seats of the cavea and by extending the orchestra over the area formerly occupied by the stage. The additional space was needed for gladiatorial combats, and the vertical scarp, *ca.* 2.40 m. high, toward the side of the cavea protected the spectators from the wild beasts used for the performances. In the side of this scarp, on the main axis of the building, a cave-like room was cut in the native rock with an opening towards the orchestra. This was probably used as a cage for the wild beasts. In the large theatre at Corinth there are three similar caves under the lower part of the cavea.[1]

To the last period belong the large epistyle blocks and cornices of the Ionic order which are now lying along the north side of the orchestra (Figs. 1 and 6). These were intended to be seen from both sides, and on some of them the fasciae and mouldings also extend around the ends. The cuttings by which they were fitted together show that the columns on which they rested were arranged in pairs, one epistyle block extending between the columns of each pair, and at right angles to it another block extending from each column to the front wall of the scene-building. The columns belonging to this period were probably taken from the second century building. The granite could withstand the action of the heat much better than the marble, so that these columns probably were not destroyed by the fire. The exact disposition of the separate building blocks cannot be discussed in a report of this nature, but will have to await a study for the final publication of the building.

The floor of the arena was made of packed earth and mortar, but was not covered with marble. Certain parts of the building were plastered, especially the vertical scarp below the cavea, where some of the stucco is still preserved. Other parts which may belong to the

[1] See T. L. Shear, *A.J.A.*, 1926, p. 451.

same period are the mosaic floors north of the scene-building and the marble stairway on the east side. The latter is carelessly constructed of re-used material, which was probably taken from the earlier building.

The workmanship of the third period is very poor and agrees well with the decadent art of the third century. On some of the cornice blocks the dentils are merely indicated, and the fasciae and mouldings on the epistyle differ from one block to another.

The second reconstruction seems to have remained without change until the final disuse of the Odeum towards the end of the fourth century. The coins found on the late floor of the orchestra, in the vaulted passage under the cavea, and elsewhere date mostly from the second half of that century. From that time until the modern era no large buildings occupied the site.

The epigraphical finds from the excavations are very scanty. Aside from the inscription mentioned above, only two inscribed marble fragments were discovered this year, and those are too small to be of importance. Of greater interest are the stamped tiles, of which a great number were used as flooring of the small drain in the orchestra. Most of these have two stamps each, one of which is always K MAI, the second and the third letters being in ligature. The second stamp is one of the following: ΠΛΩΤΙΟΥΠΑΤΗΡ, with the last two letters in ligature, ΑΓΩ, ΕΥΤ, ΑΛΕ, ΠΡΕ (or ΤΓΡΕ), and ⊥Α⅂ (?). The tiles, which measure 0.69 X 0.60 m., are flat with the edge turned up on both sides, and on the under side is a groove at the lower end, and a raised line on top at the upper end, which fit together where the tiles overlap. A number of similar tiles with the same stamps were found in the fill of the curtain channel, and others came out of a fallen piece of vault from the corridor on the north side. Since they were originally intended as roof tiles it is not unlikely that both in the drain and in the vault, they were used at second hand, and if this is the case they must date back to the first period of the Odeum.

The fragments of *terra sigillata* found along the south side of the cavea and under the floor of the vaulted passage have already been referred to. These are important not only for the dating of the building but also for the light they throw on the commercial relations between the Roman colony of Corinth and the home land in the first century of our era.

The following signatures appear:

A TITI.....Below is a palm branch. *C.I.L.*, XV, 5649.
AVILLI[1].....*C.I.L.*, XV, 5036.

[1] *Cf.* T. L. Shear, *A.J.A.*, 1926, p. 446.

CAMVRI[1] ..... Two examples. The second and third letters are in ligature. *C.I.L.*, XV, 4955.

CRE
STY ..... Probably the same as *C.I.L.*, XV, 5157.

C Ƨ F (?) ..... May be the same as *C.I.L.*, XV, 5564 e.

C·VOL
VSEN ..... *Cf.* *C.I.L.*, XV, 5790.

LLAR or EIAR (?) ..... The last two letters are in ligature. Probably like *C.I.L.*, XV, 5325 c.

L·TITI·TY ..... *Cf.* *C.I.L.*, XV, 5682.

I
OPOM E
SERENI ..... *Cf.* *C.I.L.*, XV, 5570.

PIL ..... *Cf.* *C.I.L.*, XV, 5440.

PLOTЬI
RVFI ..... *C.I.L.*, XV, 5452.

RASIN[1] ..... Only the last four letters are preserved. *Cf.* *C.I.L.*, XV, 5495–5517.

XAPIƧ

The most important results of the excavations in the Odeum, apart from the building itself, are the sculptural finds. On the second day of active work a female statue (Plate VI and Fig. 8), larger than life size, was discovered on the west side of the orchestra, *ca.* 1.50 m. above the floor. Though this is plainly a work of Roman date, the type is that of a sixth century statue, much like the pre-Persian Maidens from the Acropolis in Athens. The head and the lower part from above the knees are missing, but the rest is in excellent state of preservation. A large fragment, consisting of the right hand and part of the drapery, which was found in the Odeum last year, makes a perfect joint with the broken right arm. The material is white marble of fine grain resembling the Pentelic. The head is broken off below the neck, but the arrangement of the hair can be determined. On the back it falls in a solid mass on which the separate locks are but slightly indicated, and two long curls on each side hang down in front over the shoulders.

The drapery has the conventional forms of the sixth century, consisting of chiton and peplos. The crinkled texture of the former is carefully rendered. Below the neck and at the edge of the sleeve it is trimmed with a plain border, which was probably painted, and over each arm it is held by six circular clasps or buttons. It is fitted tightly to the body except in front, where it forms a broad fold, the lines of which are continued below by a still broader fold of the peplos. The latter forms a *diplois* at the upper edge, which passes over the left shoulder and under the right arm. The Roman sculptor seems not to have understood the drapery he was copying, which

PLATE VI. STATUE OF ATHENA ARCHEGETIS FROM THE ODEUM

he made more conventional than is common on archaic statues. The *diplois* is rendered with folds of geometric regularity, which make it appear as if it were a separate piece worn like a baldric rather than part of the outer garment.

The right arm is held nearly straight down on the side, and the right hand holds the drapery. On the left side the folds of the peplos curve in such a way as to suggest that on the original the left hand

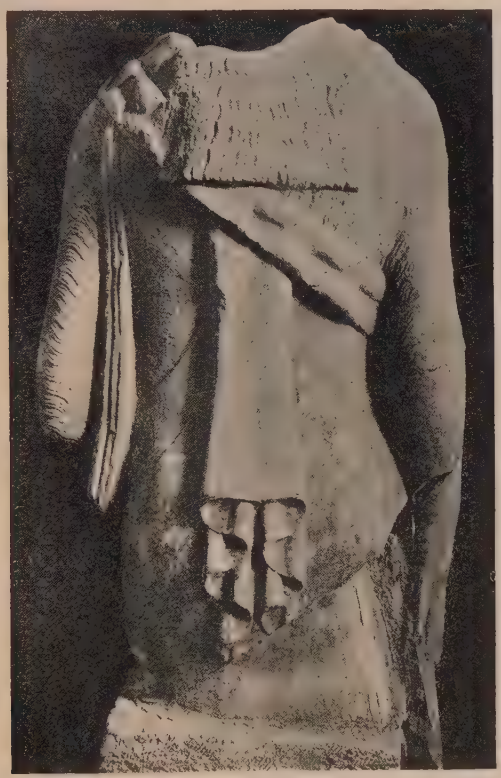


FIGURE 8. REAR VIEW OF ATHENA STATUE FROM THE ODEUM

held up the drapery. It is possible that the copyist changed the position of the hands but did not make the folds of the drapery correspond. Unfortunately the break comes just below the place where the folds curve toward the side, so that it is not evident how the drapery was finished below. The more common rule in archaic statues of this kind is that the left hand holds the drapery and the right some kind of votive object. The reason for deviating from the rule in this case may have been that the statue was one of a pair with

symmetrical arrangement. This seems probable from the discovery last year of a left hand in which the drapery is held in exactly the same way as in the right hand on our statue. Since this hand was also found in the Odeum, it seems likely that it belongs to another archaistic statue and that the two were set up in close proximity, probably in niches on the back wall of the stage.

The left arm is bent at the elbow and held close to the breast, and in the left hand is an owl. This is somewhat surprising, since the owl cannot be a votive object such as is commonly held by female statues of this kind. Furthermore, the hand with the owl is not held forward as if it were bringing an offering; consequently the owl must be considered an attribute. This makes it possible to identify the statue as that of Athena.

Representations of Athena holding the owl in her hand are not uncommon, but as a rule it is the armed goddess who is so represented.[1] In our statue all other attributes are lacking. In a single ancient reference, a scholion on Aristophanes, we are told that the statue of Athena Archegetis is holding an owl in her hand,[2] consequently all the statues of that kind have been considered as representing Athena Archegetis. Müller,[3] who lists a number of such statues, rejects the authority of the scholiast and thinks that the owl held in the hand has often no more significance than when it is found in some other place. On the other hand, we know, both from inscriptions,[4] and from literary references,[5] that Athena was worshipped in Athens as the founder, ἀρχηγέτις, of the city, and a dedication to the goddess under the same cult name has been found in Epidaurus. Two fragments of sculpture,[6] both from the Acropolis in Athens, show an owl perched on a hand which is probably that of Athena. From these references and from existing representations of the goddess we may conclude that statues of Athena Archegetis were known certainly as early as the fifth century B.C. and that these statues held the owl in the hand. There is a strong probability, then, that the statue found in Corinth is a Roman copy of an early statue of this type.

Another statue, hardly less important but less well preserved, was found in the fill of the curtain channel. It is broken into small fragments which are so badly damaged by fire that some of them crumbled away as they were picked out of the soft earth. In fact, the greater part of the statue was completely turned into lime.

[1] See Müller, *Denkmäler*, 2, Pl. XX, 219.
[2] *Aves*, 515.
[3] *Op. cit.*, 2, p. 155.
[4] *C.I.G.*, 476, 477.
[5] Ar. *Lysistrata*, 643; Plutarch, *Alcibiades*, 2.
[6] Schöne, *Gr. Reliefs*, 87 and 137.

The statue, which was considerably larger than life, was that of a Roman in military dress. The fragments which are large enough to be recognized are chiefly from the lower part of the statue, but a left hand and some pieces of drapery, probably of the *paludamentum*, which were found in the curtain channel, seem to belong to the same statue. A fragment of the right leg preserves the upper part of the boot made of a panther's skin with the head hanging down and held

FIGURE 9. FRAGMENT OF RIGHT LEG OF STATUE WEARING CUIRASS

up above by two serpents, the heads of which come together in front and hold a link between them in their mouths (Fig. 9). About the groin were two rows of metal lappets, attached to the lower edge of the cuirass and decorated with medallions in high relief. Below these was a kilt of leather straps with a double fringe. These straps are so deeply undercut that they appear to be hanging free, the texture of the material is indicated by fine incisions (Fig. 10), and

the edges of the straps and the fringes are rendered with the greatest attention to detail.

Of the medallions on the lappets six are well enough preserved to be identified, and five of these belong to the upper row. They are: the head of Zeus Ammon, the head of Medusa, an eagle with out-

FIGURE 10. FRAGMENT OF STATUE WEARING CUIRASS, SHOWING DETAILS OF LEATHER STRAPS

stretched wings, an elephant's head, and a ram's head. To the lower row belongs an Amazon's shield with a small Gorgoneion in the middle.

The Medusa head (Fig. 11) is not only the best preserved, but also the most beautiful. The face is turned to the right in half profile, but the back side is as carefully finished as the front. The hair falls

in heavy locks on the side, and a single curl hangs over the forehead. Two wings extend from the top of the head, and round the neck are two serpents tied in a knot in front.

The head of Zeus (Fig. 12), of which the chin and most of the beard are missing, is facing to the front and is large enough to cover nearly the whole lappet. The hair is parted in the middle and falls

FIGURE 11. HEAD OF MEDUSA FROM LAPPET ON STATUE WEARING CUIRASS

in gentle waves over the forehead, from which small horns come down on the sides and curve around to the corner of the eyes.

Although the preserved fragments are small, it is possible to establish from other similar statues to what period this statue belongs, and even the person whom it represented can with great probability be identified. The closest parallel, so far as the armor is concerned, is a statue of Hadrian from Olympia, discovered in the Exedra of Herodes Atticus.[1] From this we can infer how the

[1] *Olympia*, III, p. 271, Pl. LXV.

medallions on the Corinth statue were arranged. Though not in every respect alike it is possible that in front they were arranged similarly on the two statues. On the Olympia statue a head of Zeus Ammon occupies the middle medallion, on each side of which is an eagle, a Gorgoneion, an elephant's head, and a rosette in symmetrical arrangement. So far as the elephant's heads, the medallions on the Corinth statue probably came in the same order, but then followed a ram's head corresponding to the rosettes on the Olympia

FIGURE 12. HEAD OF ZEUS AMMON FROM LAPPET OF STATUE WEARING CUIRASS

statue. Although the armor of these two statues was probably much the same, the workmanship is totally different. On the Olympia statue the figures on the lappets are carelessly made in low relief, the texture of the leather straps is not indicated, and the workmanship in general is far inferior to that of the Corinth statue.

Another similar statue, also of Hadrian, was discovered at Hierapytna in Crete in 1870 and later taken to Constantinople.[1] Here the

[1] *Mus. Imp. Ottoman, Catalogue des Sculptures*, 1893, p. 18; Sorlin-Dorigny, *Gaz. Arch.*, 1880, p. 52 ff. and Pl. 6; W. Wroth, *J.H.S.*, 1886, p. 126 ff.

Emperor is standing with his left foot on a crouching child, representing a conquered enemy. He wears the panther's skin over his boots, as on the fragment from Corinth, and the figures on the medallions are the head of Zeus Ammon in front with eagles and Gorgoneia (called winged Hermes' heads in the catalogue) on each side.

The type of statues under discussion came into use as early as the first century A.D. and continued until the time of the Antonines,[1] but the close similarity of the two statues of Hadrian with the fragments from Corinth makes it highly probable that all three represented the same emperor.

The great difference in the treatment of the hair and in general effect between the head of Zeus and that of Medusa, shows that the Roman sculptor even in such details followed in the main existing models. While the Gorgoneion shows the characteristics of the Hellenistic period, the calm dignified expression on the face of Zeus and the regularity with which the waves of the hair are rendered, point to a fifth century prototype. The artistic excellence of these two heads and the exquisite workmanship of all the fragments show that the Greek artists of the second century A.D. were still able to produce works of art worthy of the old tradition.

The author takes this opportunity to express, on behalf of the Director of the American School of Classical Studies, Professor Rhys Carpenter, a deep sense of gratitude to the University of Cincinnati, which, through the kindly offices of Professor W. T. Semple, has made possible the excavations and discoveries recorded in this report, and which has assured future investigations at Corinth.

Oscar Broneer

American School of Classical Studies
Athens, Greece

[1] Anton Hekler, *Jahresh.*, 1919, p. 190 ff., has shown that the panoplied statue goes back to Hellenistic prototypes.

American School of
Classical Studies
at Athens

EXCAVATIONS IN THE THEATRE DISTRICT AND TOMBS OF CORINTH IN 1928

PLATE VII

THE campaign of excavation in Corinth, of which a preliminary report will herewith be given, was a continuation of work done in previous years in the theatre and in its immediate neighborhood. Accounts of the earlier campaigns were published in this JOURNAL in 1925 and in 1926.[1] The work of this year, which was conducted as usual under the auspices of the American School of Classical Studies at Athens, was begun on February 22 and continued until June 6.[2] The members of the staff were Richard Stillwell who had charge of all architectural studies, F. J. M. de Waele in charge of the theatre, Frederick Schaefer in charge of operations at the sanctuary of Athena Chalinitis, and Miss Angela Johnston and Miss Josephine Platner who supervised the excavations of tombs north of the theatre. Howard Comfort was a member of the staff from March 9 to April 5 and made a special study of the Arretine signatures found in this area which will be published in a later number of this JOURNAL.

The centre of the season's work was the great theatre, and the chief aims were the clearance of the stage and the uncovering of the east parodos. Although the problem of the removal of accumulated earth from the area of the theatre is always a difficult one it was to some extent simpler this year than in the previous campaigns. The excellent foreman, Sophokles Lekkos, was familiar by his training in 1926 with all the details of the work, many of the laborers had been employed on the site before and understood the technique and the aims of the task, and furthermore as the excavation proceeded to the east the depth of the deposit of earth to be removed was diminished. Also the double-track system of rails over which the earth is carried in cars to the dump nearly half a mile distant was laid and ready for operation on my arrival. Consequently the removal of earth for the season reached a total of 8,300 tons, of which 6,500 tons were from the theatre and 1,800 tons were from the neighboring precinct of Athena Chalinitis. The total amount of earth removed from the theatre in my three campaigns there is 21,500 tons.

Figure 1 shows a view from the southeast of the orchestra and

[1] XXIX, 1925, pp. 381–397, and XXX, 1926, pp. 444–463.
[2] A summary report of the results was published by me in the *Illustrated London News*, July 28, 1928.

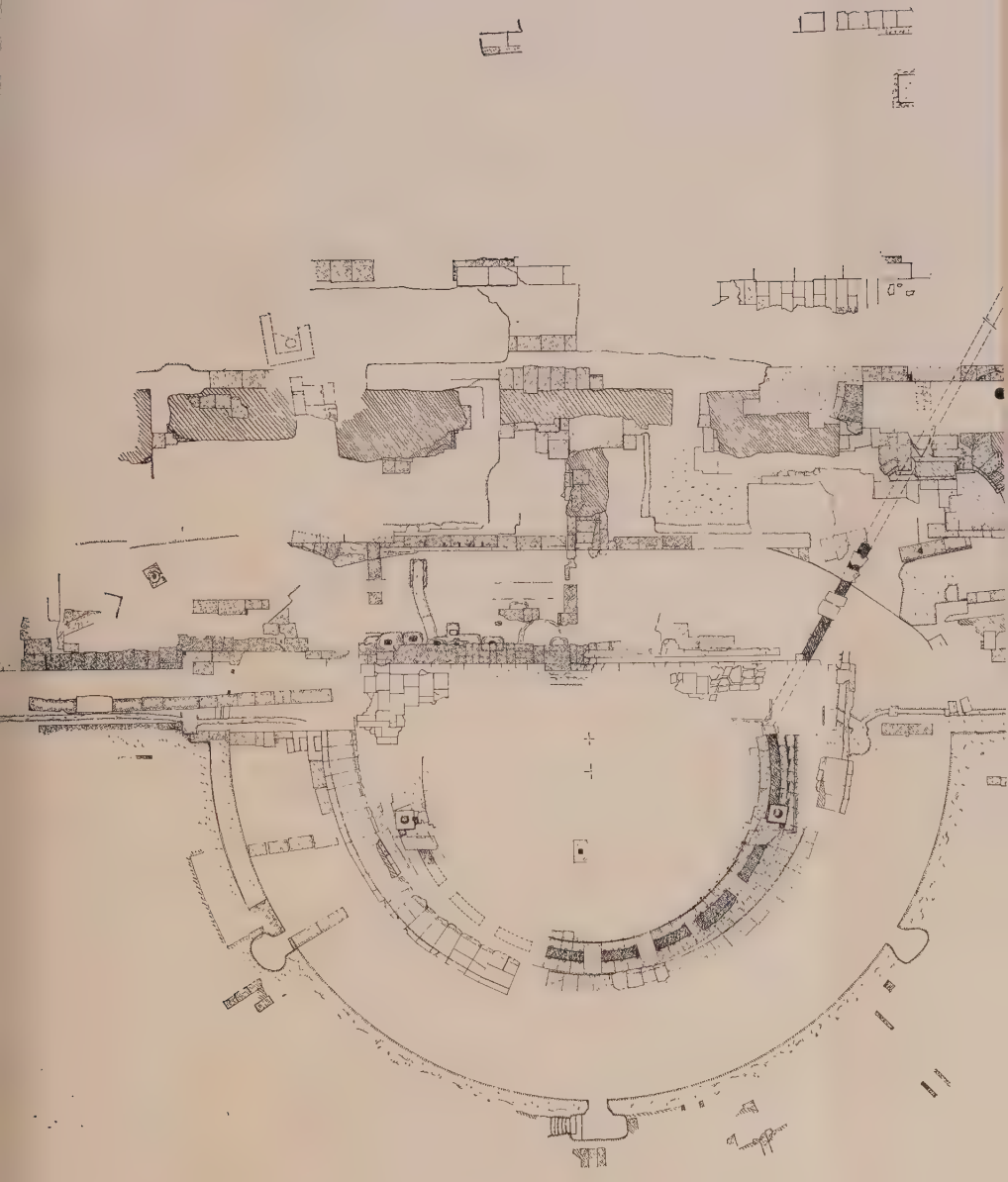
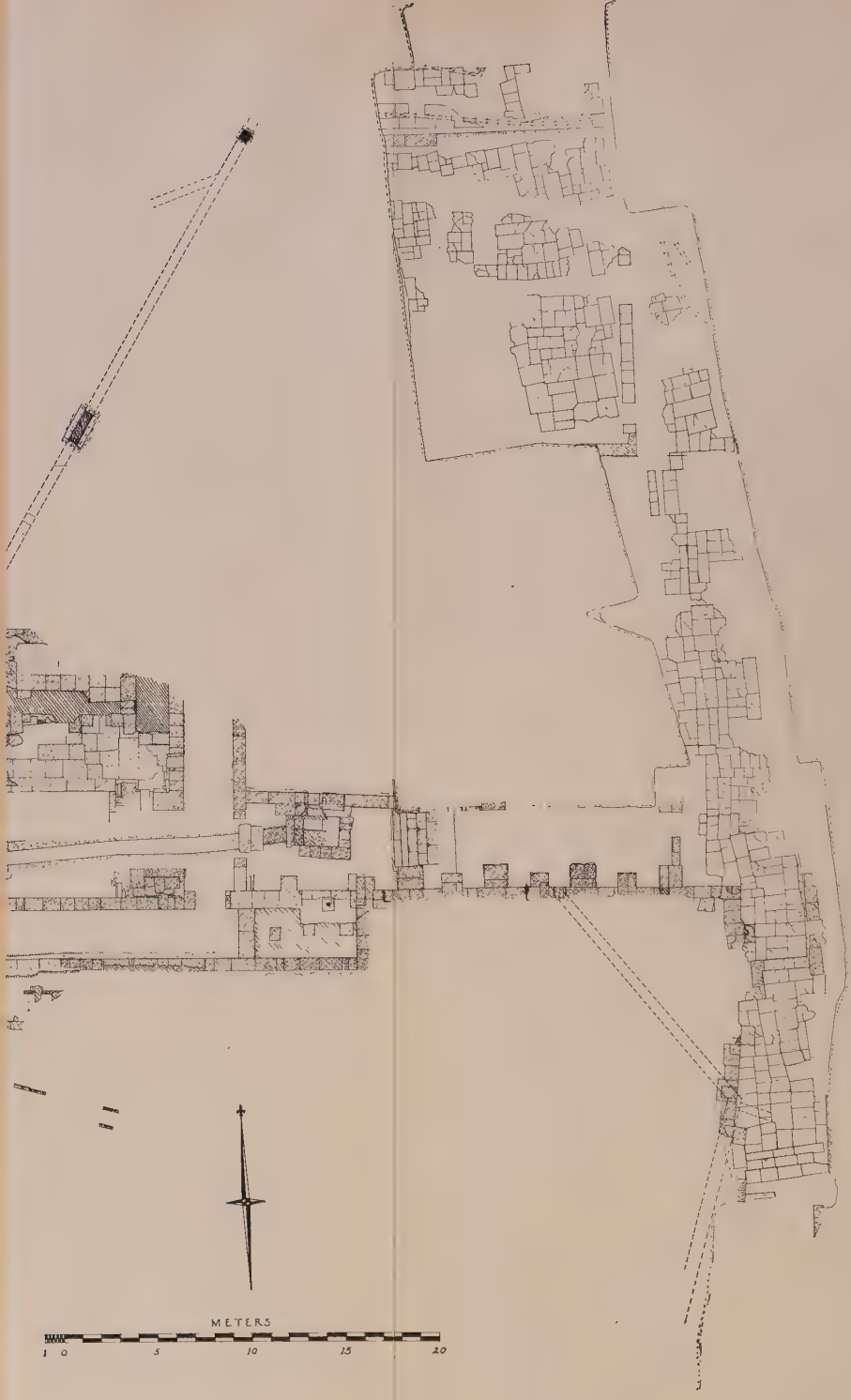


PLATE VII. PLAN OF THE THEATRE



AND ADJOINING STREET

stage as they now appear. If this picture be compared with a view from a similar position included in the report of the results of the campaign of 1926[1] the progress of the work may be readily observed. The plan of the theatre reproduced in Plate VII was measured and drawn by Richard Stillwell. It should be compared with the plans of the building published at the conclusion of the seasons of 1925 and of 1926.[2] Only the foundations of the stage building are preserved and as these belong to several periods of construction their correct identification and interpretation are extremely difficult. Mr. Stillwell is devoting careful study to these architectural prob-

FIGURE 1. VIEW OF THE ORCHESTRA FROM THE SOUTHEAST

lems and will presently publish in this JOURNAL a preliminary article dealing with the subject. It will, therefore, be sufficient for the purposes of this report to state that in the remains of the stage evidence is available to establish the presence of Greek and Roman epochs similar to that occurring elsewhere in the theatre. Some foundation blocks of the Greek building have Greek letters as mason's marks, and there still remain *in situ* three blocks of the north wall of the Greek parodos on the east side. There are also many stones of the Augustan theatre and even more of the later Roman building.

Some small trial pits were again dug in the orchestra with results

[1] *A.J.A.*, XXX, 1926, p. 449, fig. 4.
[2] *Ibid.*, XXIX, 1925, p. 382, fig. 1, and XXX, 1926, p. 450, fig. 5.

that are important for the determination of the age of the several stratifications of the floor, and these will be discussed in the later architectural study of the building. On the painted circumference wall of the orchestra Dr. de Waele with keen perception deciphered an additional graffito. This is the word ὀρεσίτρο[φος] which is scratched beneath the lion to the east of the central passageway. This Homeric epithet of the lion appearing here[1] seems to me to confirm my interpretation of the graffito under the lion on the opposite wall as referring to the story of Androkles.[2] For it was the noted Homeric scholar Apion who told of the adventure of Androkles as he said that he had seen it in the Circus Maximus in Rome,[3] and who subsequently made a triumphal tour of the cities of Greece where he was everywhere enthusiastically acclaimed for his mastery of the Homeric poems.[4] Apion, who was jocularly called by Tiberius the *cymbalum mundi*,[5] made his trip to Greece after Caligula's accession to the throne in 37 A.D. If this plausible interpretation of the graffito be correct it furnishes confirmatory evidence for assigning the wall to the Augustan theatre.[6]

The water channel about the Greek orchestra was thoroughly investigated. It did not have an outlet on the northwest side, but starting from that point the floor of the channel slopes gently as it circles the orchestra to the northeast corner where it passes beneath the foundations of the stage. Here the channel was wholly filled with accumulated earth, in which were found fragments of coarse pottery and also four bronze coins, two of Constantius II (337–361 A.D.), and one each of Valentinianus II (375–392), and of Theodosius (379–395). This evidence would indicate that the channel was open and in use until the final destruction of the theatre by Alaric in 396 A.D. After the drain passes beneath the ground the deposit of earth is smaller and reaches to less than half the height of the channel. In this earth as far as it has been excavated no objects of any kind were found. The channel, which is 1.30 m. high where it passes under the stage and gradually increases in height farther in with the sloping of the floor, proceeds in a straight line to the northeast for a distance of 42 m. At a point 22 m. from the entrance an ancient break in the vaulted roof had been covered by large slabs of stone and marble, on one of which a well carved Latin inscription was partly visible. This inscription could not be re-

[1] *Il.*, 12, 299; *Od.* 6, 130.
[2] *A.J.A.*, XXX, 1926, p. 453.
[3] Gellius V, 14.
[4] Seneca, *Epist.* 88, 40.
[5] Pliny, *Nat. Hist.* Pref. 25.
[6] See *A.J.A.*, XXIX, 1915, pp. 387 and 388.

moved from the interior of the drain without danger of the collapse of the vaulting and therefore it was necessary to dig a pit from the surface of the earth at the point indicated. When the Latin inscription was secured in this way it proved to be a broken slab of marble with part of a dedication by P. F. AEM. PRIMUS. The name Aemilius occurs on an architrave block in the peribolos of Apollo at Corinth, and both names, Aemilius and Primus, appear, though not in conjunction, as duoviri on Corinthian coins, but the combination as it occurs on the new inscription has not been noted by me elsewhere.

While the motive for digging the pit was the salvage of the Latin inscription the operation brought to light a more important Greek inscription. In the pit at a depth of 4 m. below the surface of the ground, and 2 m. above the top of the drain, was found a statue base with a dedicatory inscription in Greek letters of a character that probably belongs to the end of the first century A.D. The inscription records the erection of a statue of a boy, L. Beibios Floros, by his father, L. Beibios Oursoulos, because the boy, as a comic actor, had won prizes at various games: the Heraea in Argos, the Kaisareia in Corinth, the Kaisareia in Sicyon and the Asklepieia in Epidaurus. There are many subjects of interest in this inscription which will be discussed by Dr. de Waele in a special article.

From the place in the drain where the inscription was lying the channel was followed to the northeast for a farther distance of 20 m. where it terminates. At the end is a manhole which originally led to the surface of the ground, but the top of which had been subsequently covered by earth to the depth of a metre. A small hoard of twenty-seven bronze coins was discovered on the floor of the drain at the bottom of this manhole, which is 7.40 m. below the present level of the ground. The coins are very badly corroded but they are large heavy pieces and the corrosion slowly yields to the electrolytic process of cleaning. Those so far cleaned are coins of Marcus Aurelius, of his wife Faustina, and of Antoninus Pius, and of these some were struck in Corinth and others in Rome. From their uniform appearance it is probable that the coins not yet cleaned belong to the same period as those that are now legible. At a distance of 3 m. before the end of the drain is reached a branch leads off to the southwest, but this has so far been followed for a stretch of only four metres. The channel contains a deposit of moist earth of an average depth of fifty centimetres and the work of clearance in the dark cramped area is slow and arduous.

The walls of the parodos are well preserved on either side, reaching a maximum height of 3.50 m. The excavation of the earth and

debris near its entrance was slow as the space was blocked by fallen masses of concrete that had formed the vaulted roof of the tunnel by which the parodos passed beneath the cavea. But enough of this construction had remained in place to permit of its architectural restoration on paper. Figure 2 gives a view of the parodos as seen from the west across the orchestra and the foundations of the stage. With a width of 2.65 m. and with its floor gradually sloping upwards the parodos proceeds to the east for sixteen metres where it is blocked by a massive pier of late construction. It thereupon makes a right-angled turn to the north and continues in this direction as far as the excavation here has progressed. The space occupied by the

FIGURE 2. THE EAST PARODOS AS SEEN FROM THE WEST

late corner pier is 6.50 m. long, so that the parodos of the first Roman theatre ran 22.50 m. to the east. It then turned to the north extending in this direction for four metres, from which point it resumed its course to the east. Part of the loose stone construction of the pier was excavated with great care in search of evidence for its date, but nothing significant was found in it except one small bronze coin. This is a coin of the late Empire of the type of Constantius II, but the obverse is too badly rubbed to be legible. On the reverse a standard is represented between two soldiers with the accompanying inscription GLORIA EXERCITUS. On the basis of this evidence a reconstruction of the theatre, with at least partial blocking of the parodos, took place in the course of the fourth cen-

tury A.D., and possibly less than fifty years before the final destruction of the building.

Just north of the late pier and 1 m. below its top a marble statue was found lying horizontally and parallel to the wall. It had the appearance of having been placed in its position with some degree of care. It is a Roman work representing a man somewhat larger than life-size dressed in an under garment with a great cloak draped about the body (Fig. 3). The right arm is bent at the elbow and the right hand, protruding from the cloak, grasps folds of the garment in front of the breast. The left forearm is extended at right angles to the body and supports the end of the cloak that is hanging over it. The folds of the toga are many and graceful but they are not carefully executed. The head is missing but the figure evidently represents the type of a Roman statesman. In the earth just above the statue there were two coins of the late Empire of the type of Constantius II, and another similar coin was actually imbedded in one of the folds of the cloak. This is again confirmatory evidence of the general destruction that took place here at the end of the fourth century A.D.

FIGURE 3. MARBLE STATUE OF A ROMAN STATESMAN

A rather extraordinary statue of a horse was uncovered at approximately the same level as that of the Roman statesman, but north of the north wall of the parodos. The animal is carved from marble in crude and unfinished workmanship. It is squatting on its hindquarters on a sloping base. The tail is conveniently curled along one side and the hoofs of the forelegs are firmly planted on the ground in front. As the forepart of the body is missing the interpretation of the pose is difficult.

Throughout the bank of earth at the east end of the stage were also scattered many pieces of sculpture in relief that belong to the friezes of the gigantomachy and amazonomachy, of which much was brought to light in the previous excavations in the theatre. An important fragment represents in back view a nude warrior with finely modelled muscles, who is holding on his outstretched left arm a large round shield with a head of Medusa in relief as its device. Another fragment shows a warrior in front view with a shield, and with a cloak hanging over the left forearm. On the interior of the shield, which is here seen, and on the folds of the garment red paint is preserved, such as we have become accustomed to expect

FIGURE 4. EAST SECTION OF EAST PARODOS

on the marble statuary of Corinth.[1] Among the other pieces of these reliefs are the lower part of a draped goddess, who is fighting with a giant, and a fine torso of a giant. Progress is being made with fitting together the hundreds of pieces of these reliefs and the prospect is encouraging that eventually many of the slabs will be wholly or in large part recovered.

The entrance to the eastern section of the parodos was blocked at a late period by a water basin with a channel to the orchestra, which apparently is contemporaneous with the pier construction in the corner of the parodos to the south of it. Throughout most of the Roman period, however, the entire parodos must have been in

[1] See *A.J.A.*, XXXII, 1928, pp. 330 ff.

use. It extends for a distance of 21 m. from the right-angled turn. A flight of four low steps, with cuttings in the rock evidently intended for gate posts, is at the west end, but for the rest of the way the floor is a gently upward-sloping ramp. The south wall, which is the supporting wall of the cavea, is strengthened by a series of eight buttresses, four of which are bonded into the wall while the alternate pillars simply abut on it. A view of this section of the parodos with the buttressed wall, as seen from the west, is given in Figure 4. A plausible explanation of the two types of buttresses

FIGURE 5. COINS FROM THE "ORIENTAL" HOARD

is that those forming an integral part of the wall belonged to the Augustan theatre, the structure of which was subsequently weakened, perhaps by the earthquake in the time of Vespasian,[1] and therefore required to be strengthened by the massive pilasters built against the wall.

A settlement of Byzantine houses, some of the walls of which were laid on the very wall of the parodos, was located above the

[1] Suetonius, *Vespasianus*, 17.

parodos for its entire length and was not far below the present surface of the ground. Pottery, lamps and coins were found in abundance in these houses, and in one of the rooms was a small hoard of bronze coins of unusual interest. Seventy-three pieces are in this hoard, of which three are imperial Byzantine coins of Michael IV, 1034–1041 A.D., of Theodora, 1055–1056, of Constantine X, 1059–1067, one is a so-called anonymous Crusaders' coin,[1] and the remaining sixty-nine are coins of eastern type. Among the latter several variations are represented, as may be observed in the selection of examples illustrated in Figure 5. A characteristic design is that of an elephant, above whose back is a radiate head set in a wreath, on either side of which is a star. Equally distinctive is a conventionalized lion or tiger with wings or plumes extending from its back. These emblems are interchangeable on the faces of the coins, the elephant occurring on the obverse with the tiger on the reverse, the elephant appearing on both faces, or the tiger appearing on both. Either design is also found to be represented with or without an inscription on the obverse and with only an inscription on the reverse. Again on many of the coins an inscription alone is shown on each face where it is set within a decorative border. The units of the hoard were found together in a small room within high walls. Nothing else was discovered in the room. The date of the coins is fixed in the latter part of the eleventh century by the three pieces of imperial issue. The inscriptions are in Arabic, but in only one instance is a word clearly legible, the name Allah, which is stamped across the body of an elephant. Much investigation on my part and inquiry of specialists in the immediate field concerned have failed to reveal any previous publication of similar coins. The Arabic inscriptions would indicate a provenance from Asia Minor or Palestine, and the Crusaders' coin in the hoard would suggest the possibility that they were brought to Corinth by some participant in the first crusade.

Before it was apparent in the progress of the excavation that the parodos turned north at about half-way of its lateral extent a small area was dug in what later proved to be the north end of the east cavea. As was the case in the west side of the cavea no remains of seats or of foundations for seats were found, but beginning at a point about two metres below the present level of the ground objects were discovered that date uniformly earlier than the end of the fifth century B.C. and that in some cases certainly go back to the beginning of that century. These objects include terracotta figur-

[1] Class IX of A. R. Bellinger's classification in *The Anonymous Byzantine Bronze Coinage*, p. 7.

ines of horses and doves, several terracotta statuettes of women, much Corinthian and Attic pottery, Greek lamps, and no less than twenty Corinthian bronze coins of the type with the Pegasus represented on the obverse and on the reverse the trident. This underlying deposit that can be thus dated within reasonable limits will be of value for the study of the earlier history of the theatre.

At a point that is 60.20 m. distant from the centre of the Roman orchestra the parodos opens into a broad paved street that runs in a general direction from north to south at right angles to the parodos. The level of the street is six metres higher than the floor of the or-

FIGURE 6. "THEATRE" STREET. VIEW TO THE SOUTH FROM THE NORTH PLAZA

chestra. Opposite the entrance to the parodos its width is 5.70 m. Farther south it narrows to 4.50 m. and then becomes again wider, 5.50 m., while to the north it leads into what is apparently a broad open square, which has so far been cleared to a width of 17 m. with the pavement continuing beneath the unexcavated bank of earth. Figure 6 reproduces a photograph of the street as it is seen from the north looking across the plaza towards the south. The pavement is composed of large blocks of the hard limestone of Acrocorinth like that of the Lechaion Road, and as on that road there is also a curb here which is preserved in places. The street ascends steadily to the south, both by sloping ramps and by flights of steps. In order

to prevent the slope of smooth stone from being dangerously slippery in wet weather the blocks are roughened by vertical lines chipped in the surface. The presence of the steps proves that the street could not have been used for vehicular traffic, so that when a lady guest was escorted to the theatre the conveyance must necessarily have been a litter, as it was for the Queen Nikaia when she attended the musical festival arranged in celebration of her wedding.[1] The street has been cleared for a total paved length of sixty-two metres. Its course has been followed for a farther distance of fifteen metres to the south, but at this end the pavement blocks

FIGURE 7. "THEATRE" STREET AS SEEN FROM THE SOUTH END, WITH THE CAVEA WALL ON THE LEFT

have been removed. More investigation will be necessary in a future campaign to determine the outlet of the street to the south from the theatre district, and to ascertain the direction it follows on its way to the agora.

As the street passes south from the entrance to the parodos it skirts the outer wall of the cavea, which is shown in Figure 7. The discovery of this piece of wall is important as its preservation permits the exact measurement of the length of the radius of the Roman theatre. Like the wall of the parodos this wall is constructed of blocks of poros and is supported by heavy abutting pilasters. An

[1] Plutarch, *Aratos*, XVII.

opening between two of the buttresses leads into a carefully built well, by which one can descend with the help of footholds cut in triangular shape in the side walls, into an underground passage that is three metres below street level. The objects found in the material and debris that filled the well are uniform in period. As shown in Figure 8 they include plates and saucers of polished red and black ware, large and small long-necked jugs, terracotta loom weights, an Arretine bowl with the signature of Rasinius and ten lamps, two of which are fragmentary. One of the lamps has a representation on its disc of an Amazon supporting a fallen companion, which is identical with that on a lamp in the British Museum[1]

FIGURE 8. OBJECTS FROM THE PIT IN THE CAVEA WALL

and is apparently from the same mould. There are also two lamps of the so-called Ephesus type, and the remainder are not incongruous with these in the matter of date, the last quarter of the first century B.C. The pottery of Rasinius is also assigned to the Augustan period and confirms the evidence of the lamps.[2] As no objects of later date were contained in the deposit it is probable that this well or manhole was not used after the beginning of the Christian era. The underground passage itself is of Greek construction. It is 1.80 m. high, with a vaulted ceiling, and its walls are covered with fine smooth Corinthian stucco which is applied directly to the firm

[1] *Catalogue of the Greek and Roman Lamps*, p. 100, No. 659.
[2] Walters, *History of Ancient Pottery*, II, p. 485. Ihm in *Bonn. Jb.*, CII, 1898, p. 119.

clay through which the tunnel is cut. It was followed to the southwest for a distance of 30 m. where it terminates in a blank wall that is finished with a coating of stucco similar to that on the sides. The purpose of this passage is not yet discernible as it is constructed in too fine a style for an ordinary drain and leads from no apparent source. It will, therefore, be necessary presently to investigate the area behind the terminal wall in search of a satisfactory explanation for the beginning or the ending of the corridor at that point. A similar passage extends from the bottom of the well in a northwesterly direction for 14 m. to its exit in the south wall of the parodos. As the Roman parodos is subsequent in period to the drain it is possible that the latter has here been cut, but some trials along the base of the north wall of the parodos failed to reveal its continuation on that side, although fragments of Corinthian and Greek terracottas and pottery were found at a depth of 1.30 m. below the floor of the parodos. Evidently the use of these underground passages was discontinued when the Roman theatre was built after the resettlement of the city. At that time the well was filled with miscellaneous debris and was not afterwards entered though, for some unknown reason, an opening was left in the wall of the cavea.

The pavement of the street lies at an average depth of 3 m. below the present surface of the ground, and this accumulated earth contained many minor objects, such as lamps, and bone and ivory stickpins. Some of the pins were elaborately made, with statuettes of Aphrodite as their terminal decorations. But the most astonishing phenomenon here was the discovery of some 4,500 bronze coins scattered for the most part in a layer of sand and burned material that was 0.50 to 0.75 m. above the pavement. The majority of these coins was lying above a stretch of the street extending from in front of the parodos for about 10 m. to the south. Their concentration here is difficult to explain, for if they had been washed down from the upper reaches there is no apparent reason why the wash should not have continued with the slope of the street to the north. These coins, the surface of which shows the usual bad corrosion, are being cleaned by the electrolytic process, and while this method is slow the results are very satisfactory. The few that have already been identified range in date from the time of Hadrian to the end of the fourth century. As Byzantine coins do not occur in this stratification the street was not open or in use after the destruction of the city in 396 A.D.

Opposite the entrance to the parodos on the east side, where several paving blocks are missing, a pit was dug below the surface of the street and at a depth of 0.80 m. were found sherds of Attic

black-glazed ware of the fifth to fourth century, of Corinthian pottery of the fifth century, and a piece of a painted terracotta sima of the sixth century. Therefore the evidence thus far available would indicate that the present pavement was laid contemporaneously with the reconstruction of the theatre in the time of Augustus. But it is certain that the floor of the east end of the parodos is of later date, because a pit beside a buttress on the south side yielded a piece of a lamp of the first century B.C. in proximity to a coin of Augustus, at a depth of 1.50 m. Furthermore, on the north side of the parodos by the buttress adjoining the street a Roman coin of Antoninus Pius was discovered below the floor level. Also, in a narrow trench farther to the west along this side of the parodos at a depth of 0.20 m. fragments of Arretine plates were lying, on one of which is the stamp (DA)MA (SES)TI; at the depth of 1.50 m. a Greek bronze coin was found which has not yet been cleaned but clearly is of the Corinthian type of the fourth century, with designs of Pegasus and the trident respectively on the obverse and reverse. Pieces of a Corinthian roof tile and of a Greek pebble mosaic were lying near this coin. Hard-pan was reached here at 2.00 m. below the surface, and immediately above it were found sherds of Corinthian pottery and of Attic black-glazed ware of the fifth to fourth centuries.

Some Byzantine graves were uncovered in the earth above the street at its north end. The skeletons were placed with the skulls to the west and the skulls are brachycephalic. In places in this area Byzantine walls have been built immediately upon the street and some graves are also on the same level. In and near the graves coins were lying close to Byzantine vases so that the ware represented can be accurately dated.

A marble statue of a youthful athlete, illustrated in Figure 9, was discovered close to the pavement on the west side of the north plaza. Like much of the statuary found in the Corinthian excavations this youth has greatly suffered from aggressive hands, as his head, both forearms and both lower legs are missing. The torso that remains is 1.05 m. high from the right knee to the neck. It is a well modelled, carefully executed Roman work in copy or imitation of a Greek bronze of the style of Polyclitus. The body shows marked resemblance in pose and in modelling to the copy of the Diadoumenos that was discovered in Delos, but the presence and treatment of the drapery bring it into association with two other works in Corinth. The statues found in the Roman basilica at Corinth, which have been interpreted by E. H. Swift as portraits of Gaius and Lucius Caesar,[1] have a garment draped on the left shoul-

[1] *A.J.A.*, XXV, 1921, pp. 337 ff., pl. X and XI.

der in a manner similar to that on the new marble, and Swift has clearly remarked the many characteristics of Polyclitan style in the subjects of his study.[1] It is, therefore, possible that the statue from

FIGURE 9. MARBLE STATUE OF A YOUTH FOUND ON THE STREET

the street also represented a member of the Augustan family done in marble after the fashion of the bronze athletes of Polyclitus.

The street which has thus been uncovered is not only an impressive spectacle in itself, as it stretches to the south for 75 m. from the open plaza, with the mass of Acrocorinth in the distance ahead, but

[1] *Ibid.*, p. 363.

it also has considerable topographical importance. It is most probable that Pausanias followed this route from the agora to the theatre and then proceeded to the other buildings located not far from the theatre, the gymnasium, the fountain of Lerna, the temples of Zeus and of Asklepios.[1] Future excavations that will be

FIGURE 10. ARCHAIC POROS HEAD OF A MAN

continued along the paved way should certainly reveal the buildings mentioned.

PRECINCT OF ATHENA CHALINITIS

The street, in its south extension, borders the west wall of the precinct that has been tentatively called the sanctuary of Athena Chalinitis. Work was conducted on a small scale in the eastern part of this area, but unfortunately no evidence, inscriptional or

[1] II, 4, 5.

otherwise, was secured to confirm the hypothetical identification. When the corps of laborers was reduced after the earthquake, and when it became obvious that the street would skirt the west wall of the area it seemed expedient to suspend operations in the east end and carry on future excavations here from the side of the street. But the large mound of earth that had been dumped at the west end from the previous excavation of the area was entirely removed, so that the general appearance of this district is greatly improved. An important fragment of sculpture was found at the west end in line with the southern extension of the street at the depth of 1 m. below the surface of the ground. This is the front part of an archaic head of a man which is shown in Figure 10. The fragment, which is 0.13 m. high, is made of poros which is covered with stucco that is painted white. Also traces of color still remaining prove that the hair of the beard was red. It is probable from the appearance of the break at the back that the piece came from a relief, and the treatment of the surface of the top suggests that a helmet was originally worn. The archaic character of the head is obvious in the projecting ridge of the eyebrows, the shape and execution of the eyes and eyelids, the moustache with the drooping ends, the beard that projects slightly forward and the lips with the apparent smile. The head resembles in some respects, especially in the treatment of the lower part, the marble head found on the Acropolis that has blue color on the hair,[1] and, while undoubtedly earlier, has many similarities with the bronze head of a warrior also found on the Acropolis and now in the National Museum in Athens.[2] The size, material, style and technique suggest the possibility that this is a fragment from a metope of the temple of Apollo, a provenance that Dr. Hill proposed for the archaic relief in poros of the forepart of a horse found in Corinth in 1925.[3]

The Tombs

In the last two weeks of the season thirty-three unrifled graves were opened in a cemetery lying about one kilometre northwest of the theatre and a short distance north of the cliff over which the earth from the theatre has been dumped. B. H. Hill and W. B. Dinsmoor had discovered and excavated graves in this area in 1915 and 1916. The graves, which are placed in close proximity to one another as may be seen by the photograph reproduced in Figure 11, lie at a depth of from one to two metres below the present level of the

[1] Dickins, *Catalogue of the Acropolis Museum*, I, p. 153.
[2] Brunn-Bruckmann, *Denkmäler Griechischer und Römischer Sculptur*, pl. 2.
[3] *A.J.A.*, XXX, 1926, p. 48, fig. 3.

earth. The most common type of grave, represented by twenty-five of the total thirty-three burials, is a poros sarcophagus that is covered by a single slab of poros. The coffin is cut from one piece of stone and has walls that vary in thickness from five to seven centimetres in respective relation to the varying sizes of the coffins. The walls are invariably coated on the interior with fine buff Corinthian stucco. The handling of the heavy coffin was facilitated by notches for the passing of ropes that were cut in each corner of the outside walls, and two strap holes on one side of the cover show how that could be let down carefully into its exact place. The coffin is usually extended in a direction from east to west, and the head of the

FIGURE 11. GROUP OF GRAVES IN THE NORTH CEMETERY

body is always at the east end. In four instances where the orientation of the coffin is from north to south the head was found at the south end.

Two variations occur in this type of sarcophagus burial and they are evidently due to reasons of economy. In one case the stone cover was placed on walls of rough rubble construction, and in the other exception one side of the cover was found to be supported on the edge of the rim of a neighboring sarcophagus while the other side rested on two small pillars of poros.

By the side of the sarcophagi occur burials in a simpler form where the body is placed within rubble walls and covered by large slabs of terracotta. Either a single tile serves as a cover or two or three are

laid side by side as the needs of the interment dictated. In one instance the tiles are 1 m. long and 0.80 m. wide, and all are made of characteristic fine buff Corinthian clay. Two graves of this type with terracotta covers offer a variation in arrangement in that the tiles are not laid flat on the walls, but are set in upright position so as to lean against each other and thus form a kind of gable roof. The contents of these graves are exactly similar in style and period to those in the sarcophagi.

Few of the skeletons were well preserved and in the graves of infants the bones had entirely disappeared, but in ten instances the skulls were sufficiently intact to permit accurate measurements to be secured. The cephalic index ranges from 69 to 78, thus classifying all these heads as dolichocephalic. The jaw of a male adult in one of the graves (No. XIII) shows a cavity in the upper right first molar tooth. This has been critically examined by Dr. F. L. Whiting who reports that there is no trace of any mechanical treatment of this cavity, which is on the occlusal surface above the palatal groove and opens into the pulp chamber of the tooth. This caused devitalization of the tooth and produced a chronic dentoalveolar abscess on the distal root, the result of which can be observed by the area of periapical destruction in the maxilla about the size of a pea. This man inevitably suffered severely from toothache before his death.

The main contents of the graves were vases, lamps, strigils and egg-shells. In several cases the shells of the eggs were complete except for small holes at one end, but they were usually found in a broken condition as might be expected from their fragile nature. In one grave (No. XVII) no less than four eggs were discovered lying close to two skyphoi. It is well-known that the egg was used by the Greeks as an offering to the dead. It appears on several sepulchral vases and monuments, and its presence in graves has been occasionally noticed.[1] In an archaic grave in Thera the offering has even become symbolized in three stone eggs.[2] The egg may have been dedicated to the dead merely as food, or it may have served as a propitiatory offering or as a symbol of resurrection to a new life.

The strigils, which numbered twenty-five in all were of many sizes, and showed minor variations in shape. They were made of bronze with two exceptions which are of iron, and they were sometimes clasped in the hand of the deceased. In the grave of a small

[1] Jane Harrison, *Prolegomena to the Study of Greek Religion*, p. 630, where reference is made to Martin Nilsson, *Das Ei im Totenkultus der Griechen*.
[2] *Thera*, Text, II, pp. 52 and 119.

boy (No. XIV) ten of these athletic implements had been placed, sad symbols of the shattering of his parents' hopes.

The five lamps, one of which was found in the earth above the graves, are of fairly uniform type, flat in form with the centre open and with horizontal ribbon handles. They were made of Corinthian buff clay and had been coated with a black slip which in one example is well preserved but in the others has largely flaked away. Mr. Oscar Broneer of the American School at Athens, who has made a detailed study of over 1,500 lamps from Corinth, has kindly given me his opinion that the lamp from outside the graves may be as late as the middle of the fifth century but that the others date from the last quarter of the sixth and the beginning of the fifth century B.C.

The most numerous offerings, however, were vases, of which 194 complete specimens were recovered. The shapes most generally represented are the lekythos with 57 examples and the skyphos with 52. The types of pottery are comprehended in three groups: the local Corinthian ware, Corinthian imitation of Attic, and imported Attic products. The Attic ware is easily distinguishable from the Corinthian imitation of it because on the latter the black glaze has invariably flaked more or less away. The Attic vases are black-figured with the exception of two red-figured skyphoi with representations of owls standing between conventionalized branches of olive. The many variations in the shapes of the skyphos and the kylix suggest the possible derivation of the latter from the former. All of the kylikes are of the type with the heavy low base, and there are several large two-handled bowls of the kylix form with no base at all. Some of the kylikes are entirely covered with lustrous black varnish, while others have bands of black-figured decorations, consisting of series of palmettes or of figured scenes between terminal palmettes. Groups of figures in the black-figured technique also occur on the lekythoi, but these are for the most part decorated with palmettes, or with an ivy-leaf design between bands of cross-hatching. About half of those found have a white ground.

The problem of assigning a date to these graves is difficult because of the heterogeneous elements among the contents. A Corinthian skyphos in the Bibliothèque Nationale, exactly like those found most commonly in the graves, is placed by Madame Lambrinos among the earliest of her Corinthian series,[1] and she justifies this dating by the statement that some examples of this technique are contemporary with geometric styles. At the other end of the scale

[1] *Corpus Vasorum Antiquorum*, Paris, Bibliothèque Nationale, Fasc. I, pl. III, C, 8, 1.

is the presence in two graves of an Attic red-figured skyphos that is decorated on each side with an owl between olive sprays. This familiar type of vase is dated by Beazley in the latter part of the fifth century.[1] Between these two extremes are the black-figured skyphoi and kylikes that are uniformly dated in the latter half of the sixth century.[2] But the situation is complicated by the fact that in one grave, No. XXX, among other objects were two black-figured skyphoi and a red-figured skyphos with the owl decoration (Fig. 12).

Numerous lekythoi are ornamented with black palmettes either on a red or on a white ground. Similar vases are dated by Orsi

FIGURE 12. CONTENTS OF A GRAVE IN THE NORTH CEMETERY

in the second half of the sixth century,[3] and he specifically disputes the attribution of this type to the fifth century by Brueckner and Pernice.[4] Two vases of this sort and a kylix decorated with palmettes in black-figured technique were found with other objects in the sarcophagus of an adult, No. XVII, on the end of the cover of which the corner of a child's coffin was resting, No. XVI. The small sarcophagus contained only a large Corinthian pyxis, with geometric decoration, on which much delicate red color is preserved.

[1] *Ibid.*, Great Britain, Oxford, pl. III, H, f, 48, 9; Text p. 40.
[2] *Ibid.*, Italy, Villa Giulia, Fasc. III, pl. III, H, e, 49, 4 and 7. Also *Mon. Ant.* XXII, 1913, p. 508, pl. LXIII, 1.
[3] *Röm. Mitt.*, XIII, 1898, p. 321. Cp. also Gabrici in *Mon. Ant.*, XXII, 1913, p. 513, pl. LXIX, 8.
[4] *Ath. Mitt.*, XVIII, 1893, p. 181.

It is similar in shape to the earlier pyxis of Attic-Corinthian style in the Cinquantenaire Museum in Brussels[1] and, if standing alone, would certainly be dated in the sixth century, but it can not be substantially earlier than the contents of Grave XVII on which it was resting.

With the exception of the owl skyphoi the contents in general fit agreeably a date ranging through the last quarter of the sixth and the first quarter of the fifth century. It is hoped that additional chronological data may be secured by further investigations to be conducted in this area in the next campaign. This interesting series of graves will be subsequently published in full detail by the excavators.

THEODORE LESLIE SHEAR

PRINCETON UNIVERSITY

[1] *Corpus Vasorum Antiquorum*, Bruxelles: Musées Royaux du Cinquantenaire, Fasc. I, pl. III, H, d, 2, 2a.

Archaeological
Institute
of America

A CONSTANTINIAN HOARD FROM ATTICA

A SMALL hoard of Constantinian bronze coins brought to my attention by Dr. C. W. Blegen is here published by his permission. It was found in Attica in 1925, and, though it exhibits nothing unexpected, it has a certain interest as furnishing some positive evidence of the trade relations of Attica in the first half of the fourth century A.D.

The hoard was buried between 343 and 345, for there are no pieces of the FEL TEMP REPARATIO type which was introduced in the latter year, while the VOT XX MULT XXX type of 343 is well represented by coins showing very little sign of wear. So far as I know, no hoards of this period from Greece have been published, but it happens that there is an exactly contemporary though much larger hoard from Egypt published by J. G. Milne ("A Hoard of Constantinian Coins from Egypt") in the *Journal International d'Archéologie Numismatique*, Vol. VI, 1914, pp. 1–27. My arrangement parallels his for purposes of comparison.

330–335 A.D.

Rev. Type, α GLOR IAEXERC ITVS Two soldiers, with spear and shield, standing facing each other; between them, two standards.

β Romulus and Remus suckled by the wolf, l.[1]

Obv. Type, A1 CONSTANTI NVSMAXAVG Bust r. diademed, wearing paludamentum and cuirass.

B1 CONSTANTINVSIVNNOBC Bust r. laureate, wearing cuirass.

C1 FLIVLCONSTANTIVSNOBC Bust r. laureate, wearing paludamentum and cuirass.

D1 FLIVLCONSTANSNOBC Bust r. laureate, wearing paludamentum and cuirass.

D2 FLCONSTANSNOBCAES Bust l. laureate, wearing paludamentum and cuirass.

E1 URBS ROMA Bust l. in helmet and cuirass.

[1] This type continued to be struck after 335, but the condition of the pieces indicates that they were among the earlier coins in the collection.

Mint[1]	*Number*
Antioch	
B1α	1
Cyzicus	
C1α	2
Nicomedia	
D2α	1
E1β	1
Constantinople	
A1α	2
B1α	1
C1α	1
Heraclea	
C1α	1
D1α	1
E1β	1

335–337 A.D.

Rev. Type, γ GLOR IAEXERC ITVS Two soldiers, with spear and shield, standing facing each other; between them, one standard.

Obv. Type, A1, B1, C1.

F1 CONSTAN TINOPOLI Bust, l. in helmet and cuirass.

Mint	*Number*
Cyzicus	
A1γ	1
B1γ	1
C1γ	1
Nicomedia	
A1γ	3
Heraclea	
A1γ	1
F1γ	1

After 337 A.D.

Rev. Type, γ

δ SECVRI TASREIP Figure holding long scepter leaning on column.

ε Emperor r. in quadriga.

ζ Veiled figure standing; in field VN MR (Venerandа Memoria)

Obv. Type, A2 DVCONSTANTI NVSPTAVGG (Divus Constantinus Pater Augustorum)

B2 CONSTANTI NVSMAXAVG Bust r. laureate, wearing paludamentum and cuirass.

B3 CONSTANTI NVSPFAVG Bust r. diademed, wearing paludamentum and cuirass.

B4 DNCONSTAN TINVSPFAVG Head r. laureate.

[1] Because of the small numbers involved it has not seemed worth while to record the various officinae of each mint represented.

B5 Same inscription. Head r. diademed.
C2 CONSTAN TIVSAVG Bust r. diademed, wearing paludamentum and cuirass.
C3 Same inscription. Head r. diademed.
C4 CONSTANTI VSPFAVG Bust r. diademed, wearing paludamentum and cuirass.
C5 CONSTAN TIVSPFAVG Head r. diademed.
D3 DNCONSTA NSPFAVG Head r. laureate.
D4 Same inscription. Head r. diademed.
D5 CONSTANS PFAVG Bust r. diademed, wearing paludamentum and cuirass.
D6 DNFLCONSTANSAVG Bust r. diademed, wearing paludamentum and cuirass.
D7 FLIVLCONSTANSAVG Bust r. laureate, wearing paludamentum and cuirass.
E1

Mint	*Number*
Alexandria	
A2ζ	1
B2γ	1
Antioch	
C3γ	2
Cyzicus	
A2ε	3
A2ζ	3
C5γ	1
D3γ	1
D4γ	1
(?)γ	1
Nicomedia	
A2ε	3
A2ζ	2
B2γ	2
B3γ	1
C5γ	5
D3γ	1
D4γ	1

Mint	*Number*
Constantinople	
A2ε	2
A2ζ	3
B3γ	1
C5γ	4
D4γ	2
Heraclea	
C2γ	2
E1γ	1
Thessalonica	
B3γ	2
C4γ	1
D5γ	2
Rome	
D6δ	1
Uncertain	
A2ε	1
A2ζ	2
C3γ	1
C5γ	2
D3γ	1
D4γ	3
D7γ	1
(?)γ	2

AFTER 340 A.D.

Rev. Type, η VOT XX MVLT XXX (Votis vicennalibus (solutis) multis tricennalibus (susceptis)) in a wreath.

θ VICTORIAEDDAVGGQNN (Victoriae dominorum Augustorumque nostrorum) Two Victories each holding a wreath, standing facing each other.

Obv. Type, C4, C5

C6 CONSTANT IVSPFAVG Bust r. diademed, wearing paludamentum and cuirass.

C7 DNCONSTAN TIVSPFAVG Head r. diademed.

D3, D4, D5

D6 DNCONST ANSPFAVG Head r. diademed.

Mint	*Number*	*Mint*	*Number*
Alexandria		Heraclea	
D4η	1	C7η	1
D6η	1	D4η	3
Antioch		E1η	1
C7η	1	Thessalonica	
Cyzicus		C4θ	1
C7η	4	D5θ	5
D3η	2	Uncertain	
D4η	5	C6θ	1
Nicomedia		C7η	8
C7η	1	D4η	10
D4η	7	D5θ	1
Constantinople			
C7η	3		

SUMMARY

Constantine I	7	Alexandria	4
Constantine I (memorial)	20	Antioch	4
Constantine II	10	Cyzicus	26
Constantius II	43	Nicomedia	28
Constans I	51	Constantinople	19
Urbs Roma	4	Heraclea	13
Constantinople	1	Thessalonica	11
Uncertain	3	Rome	1
	139	Uncertain	33
			139

The Summary of Milne's Hoard is as follows:[1]

Alexandria	1,592	Siscia	42
Antioch	1,611	Aquileia	23
Cyzicus	845	Rome	285
Nicomedia	539	Arelate	56
Constantinople	698	Lugdunum	13
Heraclea	220	Treviri	19
Thessalonica	196	Tarraco	3
			6,141

In spite of the great discrepancy in numbers and the large proportion from uncertain mints in the Attic hoard, a comparison of the two is of some interest. It will be seen that the eight mints represented in Attica are in this order of frequency in the two hoards:

Attic Hoard	*Alexandrian Hoard*
Nicomedia	Antioch
Cyzicus	Alexandria
Constantinople	Cyzicus
Heraclea	Constantinople
Thessalonica	Nicomedia
Alexandria	Rome
Antioch	Heraclea
Rome	Thessalonica

Analysis of these lists indicates that Athens' trade was chiefly with the Propontis (Nicomedia, Cyzicus, Constantinople and Heraclea), second with the north (Thessalonica), third with the south (Alexandria and Antioch). There are two differences between the lists. The first is that the mints of Antioch and Alexandria rank high at Alexandria and low at Athens. This is so natural that it calls for no comment. The other is more instructive: at Alexandria the mint of Rome is better represented than that of Heraclea and Thessalonica; at Athens there is only one Roman piece. Account should also be taken of the 156 pieces in the Alexandrian hoard from western mints other than Rome which are not represented at Athens at all. Yet Athens is nearer the west than Alexandria. Two explanations present themselves: either the old trade route across the isthmus of Corinth was largely abandoned at this time and Roman ships went to Egypt by way of Crete or Cyrene, or Athens had now become a provincial Aegean town lying off the main lines from Corinth to Constantinople and Alexandria. Some

[1] *L.c.*, p. 24.

evidence as to the first possibility is furnished by the excavations at Corinth. In 1925, there were, of course, a great number of Constantinian coins unearthed, but, as the condition of excavation coins is vile, the mint of most of these was quite beyond conjecture. Some could be made out, however, and they fall in this order:

Cyzicus	8	Alexandria	1
Constantinople	4 (possibly 6)	Siscia	1
Nicomedia	3	Lugdunum	1
Rome	1 (possibly 3)	Sirmium	1
Thessalonica	2		

Even with these scanty numbers it is at once apparent that the Propontis has a decided preponderance. The occurrence of western mints shows that trade through Corinth between the halves of the Roman world had not entirely ceased, but the proportions suggest that it was a trade of reduced importance and that Corinth looked rather to New Rome than to Old for her commerce.

The second possibility is undoubtedly supplementary to this. The trade between Corinth and the west had declined by the fourth century, and, of what was left, very little fell to the lot of Athens, which was now wholly dependent upon the markets of the east, particularly those in the vicinity of Constantinople.

Alfred R. Bellinger

Yale University

1928
January–June

ARCHAEOLOGICAL DISCUSSIONS[1]

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

EDWARD H. HEFFNER, *Editor*
University of Pennsylvania, Philadelphia

GENERAL AND MISCELLANEOUS

Development of the Plastic Arts.—In *Mannus* xx (1928), pp. 1–24, JOSEF STRZYGOWSKI, in an article entitled *Natur und Unnatur in der bildenden Kunst*, advances a new theory of the historical development of the plastic arts. Beginning with some observations on art as manifested in nature itself in symmetry and proportion, he insists that too great emphasis has been laid on the collection and study of the extant remains of the powerful peoples of the temperate zone, whose rulers imposed their will on sculptors, painters, and artists generally. He compares this period to that of the great naturalists and collectors of the last century in the field of the natural sciences. He would divide the world into the three great belts of the equatorial zone, the middle zone, and the northern, and thinks that great light is to be cast on the beginnings of art in the two zones where perishable materials were the vehicles of artistic expression. He excepts the Greeks from his strictures, in maintaining that they brought from the north their artistic gifts. So, too, in Spain, at Alpera, of the province Albacete, he attributes the high skill of primitive artists to a similar influence from the north, though he admits that this is hypothetical rather than proven.

Early Magnifying Glasses.—In *Ant. J.* viii, 3 (July 1928), pp. 327–330 (1 fig.), H. C. BECK gives evidence of the early existence of magnifying glasses. Rare pieces of round glass have been found in Egypt, one of which, in the Ashmolean collection, is claimed to be of the First Dynasty, if not Predynastic. The most conclusive proof of the very early existence of magnifying glasses is the discovery in Crete of two crystal lenses dating as early as 1200 B.C. at least, and probably 1600 B.C.

Eighteenth-Century Notes of Travel in the Near East.—A collection of notebooks, diaries, sketch-books, etc., relating to the journey in Greece and Asia Minor made in 1750–1751 by Robert Wood, John Bouverie, and James Dawkins, with an Italian draughtsman named Borra, has come into the possession of the Society for the Promotion of Hellenic Studies, and a selection from them, with comments, is published by C. A. HUTTON in *J.H.S.* xlvii, 1927, pt. 1 (pp. 102–128; 6 pls.; 5 figs.). The Englishmen were excellent classical scholars and men of cultivated tastes, Bouverie being more especially the archaeologist of the party. Wood, with the

[1] The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor Heffner, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor CARROLL N. BROWN, Miss MARY BUCKINGHAM, Professor SIDNEY N. DEANE, Professor ROBERT E. DENGLER, Mrs. EDITH HALL DOHAN, Professor HAROLD N. FOWLER, Dr. STEPHEN B. LUCE, Professor RALPH VAN DEMAN MAGOFFIN, Professor CLARENCE MANNING, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor HOMER F. REBERT, Professor JOHN C. ROLFE, Professor JOHN SHAPLEY, Professor FRANK G. SPECK, Professor FRANCIS J. TSCHAN, Professor AXEL J. UPPVALL, Professor SHIRLEY WEBER, and the Editors.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1928.

For an explanation of the abbreviations, see Vol. xxx, 1, p. 124.

assistance of Dawkins, afterwards published notes on the ruins of Palmyra (1755) and Baalbek (1757), and an Essay on the Original Genius of Homer (1767); Dawkins also helped finance the project of Stuart and Revett. The party started from Naples in May, 1750, and visited Smyrna, Sardis, Cyme, Pergamon, Constantinople and the shores of the Propontis, the plain of Troy, Tenedos, Lesbos, Teos, Ephesus, Samos, Priene, Magnesia ad Mæandrum, Tralles (where Mr. Bouverie died of a fever), Nysa, Laodicea, Hierapolis, Aphrodisias, Alabanda, Mylasa, Euromus, Halicarnassus, Cos, Ceramus, Cnidus, Rhodes, Egypt (Cairo, Pyramids, Saccara, Alexandria), Palestine (many sites), Damascus, Palmyra, Baalbek, Cyprus, Iassus, Didymus (?), Delos, and Athens, whence they made a tour with Stuart through Attica, Bœotia, Delphi, Corinth and the northern part of the Peloponnesus, returning through Eleusis to Athens. Their descriptions and the drawings of these sites and the then existing ruins of ancient cities are of the utmost value and interest, historically and archæologically.

Genesis of the Potter's Art.—In *Mannus* xx (1927), pp. 285–295 (5 figs.), Franz Langer discusses the genesis of the potter's art before the invention of the potter's wheel. The chance location of a fireplace on clayey soil or the accidental burning of children's clay toys probably led to the discovery that clay was hardened by fire into an almost indestructible condition. Only small and flat vessels could be made by hand from a ball of clay. For larger vessels a wicker-work form was lined with clay and the burning of the woven reeds or basketry helped in the firing. The impress of the weaving gave a primitive adornment to the vase, which was later imitated by tooling. Gourds and leather bags or bottles lined with clay and then filled with sand or hot coals gave many new shapes to the artist. Large jars were made by building up on a circular flat base successive rolls of clay in rings that were allowed to dry and harden till the desired height was reached. These were probably produced wholesale, not by individuals for their own use. The author quotes freely from other authorities. By the time of the later Stone Age the art had already reached a stage of high development.

The Horse of Sardis.—In *The Art Bulletin* x (1927–28), pp. 215–230 (2 pls.; 20 figs.), T. L. Shear publishes the life-size horse's head of marble discovered at Sardis on the last day of the excavation campaign of 1914. Although this disappeared during the war, the photographs show it to be a magnificent representation of an Anatolian breed of horse long cultivated and from which the modern Arab breed is descended. The breed was already represented in Hittite art, it appears in Lydian art, and, because of the relations with Greece growing out of the Persian expansion, it became standard for Greek art, where it reached its highest glory and influence in the Parthenon frieze.

Some Ancient Weapons.—In *R. Arch.* xxvii, 1928, pp. 254–277 (38 figs.), Paul Couissin discusses some ancient weapons recently discovered, after calling attention to the importance of the study of arms in general. He finds that the weapons found at Mallia in Crete (Jean Charbonneaux, *Mon. Piot* xxviii, 1925–1926, pp. 1 ff.) are not parade weapons (*armes d'apparat*). The dagger is of a very well known and widely used type. The sword has a richly decorated hilt which was once covered with gold wrought in repoussé and was attached to the blade only by four rivets. But arms have always been decorated, and the rivets are sufficient, since the Minoan sword was used only for thrusting. Other similar swords are cited in comparison. The axe or hatchet is of schist and is decorated with a spiral pattern. The butt end has the form of the head, shoulders, and forelegs of a panther wearing a harness. This axe is a combination of a beast-god (perhaps the totem of a tribe) and a weapon-god. It was probably set on a slender upright shaft and worshiped. Weapons from other places are compared with this. An axe found at Beisan, in

Palestine (*R. Bibl.*, 1927, p. 98; *Syria*, 1927, p. 187), has a curved, wave-like shape and the butt end terminates in four points. This, with an axe figured in a relief at Boghazkeui and one from Syria, form a group the centre of which appears to be Asia Minor. A so-called arrow head found at Nabatiyé, Lebanon (*Mèlanges de l'Université S. Joseph*, xi, no. 7: *Syria*, 1927, p. 185), bears an inscription which is translated "the arrow of Addo, son of Akki." An inscription on an arrow head, which, when once shot, is lost, is peculiar. This object is about 12 cm. long. It may be a votive arrow head or perhaps a javelin head. At Neïrab, Palestine, some arrow heads and a sword were found (*Syria*, 1927, p. 208). Unfortunately their dates are uncertain. The arrow heads are of common types. The sword is of one piece, both blade and hilt. The latter was once covered with plates of a non-metallic material. The weapons of the Jogassess, Marne (*R. Arch.* xxv, 1927, pp. 326 ff.; xxvi, 1927, pp. 88 ff.), do not show a break between the culture of Hallstatt and that of Latène, but a development. The belt with nail-head studs is a part of feminine apparel in the Hallstatt period, but appears in the first century B.C. on men.

ORIENTAL AND CLASSICAL

EGYPT

The Ficoroni Medallion and Other Gilded Glass in the Metropolitan Museum.—In *The Art Bulletin* ix (1926–27), pp. 352–356 (6 figs.), J. Breck publishes several examples of gilded glass in the Metropolitan Museum. The recent establishment by de Mély of the Egyptian origin and probable third-century date of the famous medallion at Brescia makes it possible to give the same origin and date, approximately, to the related Ficoroni medallion and another newly acquired medallion in the Metropolitan Museum. The Brescia medallion has occasionally been suspected, but its Greco-Egyptian word terminations combined with its mention in a seventeenth-century inventory rule out the forger.

Papyri.—In *Sitzb. Preuss. Akad. Wiss.* (Berlin) xxvi–xxvii (1927), pp. 270–276, Ulrich Wilcken gives a larger significance to the seven Michigan papyri letters published by J. G. Winter in the *Journal of Egyptian Archaeology* xiii (1927), p. 72 ff., by identifying the ἐπανορθωτὴς Ἀχιλλεύς with the usurper slain at Alexandria in the revolt against Diocletian. Winter, though he notices the resemblance in name, interprets epanorthotes as meaning *corrector juventutis*, 'one charged with revision of the service lists.' Wilcken translates the word 'reformer' or 'restorer' and supports his interpretation by an Alexandrian inscription of, he admits, decidedly uncertain meaning. It reads:

. . . . | Π Που Σεβαστοῦ | Ἐπεὶφι Κ̄ |
ἐπὶ Κλανδίου Φίρμου | λαμπροτάτου ἐπανορθωτοῦ,

where he thinks the emperor's name has been erased and the usurper's added.

The seven letters, read in this light, indicate that a certain Paniskos, who had gone to Koptos on other business, had become implicated in this new uprising and sends to his wife for his arms (Winter had regarded him as a dealer in arms), and endeavors to get other men (*cf.* μετὰ ἀνθρώπων καλῶν), including his wife's brother to join him there. Koptos had been the centre of an earlier revolution and had been destroyed a short time before (293 A.D.).

Some Types of the Nude Goddess.—In *R. Arch.* xxvii, 1928, pp. 36–49 (13 figs.), M. Pillet discusses some rude terracotta figurines found in 1922 at Karnak in surroundings which fix their date from the fourth to the sixth century A.D. Some are grotesques, derived perhaps from representations of the god Bes. The others

represent the nude female form and are divided into three categories. In the first the arms are short and extended horizontally. The navel is enormous and the sex is represented by a great triangle sprinkled with dots. The legs are separated by a line and end in a point. The face is hardly indicated, and the eyes are pellets added after the rest. The breasts are conical. The second category contains figures similar to the first, except that the hips are more developed, and a mass of hair falls over the shoulders. The arms are sometimes curved, joining the hips and looking like the handles of a vase. The figurines of these two categories are modelled separately, not made with a mould. The figurines of the third category are hollow, moulded in two pieces. The body is rounded, the breasts projecting slightly. The short arms are sometimes raised, sometimes mere projections or bosses. The head is surmounted by a great conical helmet. Black paint marks the features and ornaments the body. These figurines are similar to others found in various places in Egypt and also in other countries. The nude goddess is probably of Aegean origin, not Oriental, and such figures found in Mesopotamia are probably not very early. The date of such crude works can be determined only by careful examination of the objects found with them, and the earth of ancient sites has often been so overturned as to make the dating difficult. Methodical classification of all such objects and careful recording of all indications of date are greatly needed.

ASSYRIA AND BABYLONIA

A Crowned Head and a Statue of a Child from Mesopotamia.—In *B.S.A.* xxvii, Session 1925–1926, pp. 113–123 (pl.; 2 figs.), A. W. Lawrence publishes two monuments from Mesopotamia which are purely Hellenic in subject. These are in the Assyrian room of the British Museum. A bearded head of marble, about two-thirds of life size, is represented as wearing a crown in the form of olive leaves with a rosette clasp. This was probably a golden crown. The style of the head, and especially the great size of the eyes, show that Asiatic influences have affected the work of the sculptor. Comparison with Parthian coins and other objects justifies us in assigning this work (probably from an honorary portrait statue) to the Parthian period of the late second or first century. The statue of a boy of perhaps two years of age is of terracotta and measures, with the base upon which the child sits, 0.37 m. in height. The base is semi-circular, the rounded part being in front. The child is nude, save for a cord passing over the right shoulder and under the left arm. A round object is attached to the cord near the neck. The outstretched hands apparently held objects one of which was probably a bird. This figure, being very like a torso from Borsippa, is doubtless of Babylonian origin. A very great number of figures of children is preserved, and they have been found in many regions of the ancient world. Some of these may represent infant deities, but nearly all may be regarded as votive offerings to some deity in thanksgiving for the birth of children. Comparison with statues of children of various dates shows that this terracotta (as well as the other, from Borsippa) belongs to the Seleucid period when Mesopotamia kept closely in touch with the larger Greek centres.

The Laws of Deposit in Early Babylonia and in the Old Testament.—In *J.A.O.S.* xlvii, 1927, pp. 250–255, I. M. Price discusses the laws in regard to trusts, deposits, agents, carriers, etc. as they are exhibited in the Code of Hammurabi, and in Old Babylonian contract tablets; and compares with these the laws on the same subjects in the earliest Hebrew legislation. He comes to the conclusion that the latter agree entirely with the Babylonian system, except that they are more crudely expressed and that the penalties are slightly modified.

Polynesian Words in America and in Sumer.—In *Mitt. Vorderas. Ges.* xxxi, 1926, part 2, pp. 1–127, E. Stucken shows that Polynesian dialects closely similar to one another are spoken over an area 200° of longitude in breadth from Madagascar and Formosa to New Zealand and Easter Island. He presents a large body of evidence to show that Polynesian influence appears also in the languages of Mexico, Central America, and Peru. For instance, the word for 'butterfly' in Maori is *purehua;* in Tahiti, *purehua;* in Peru, *parahu;* in Guatemala, *porosh.* Another word for 'butterfly' or 'moth' in Maori is *pepe;* in Tahiti, *pepe;* in Guatemala, *pepe;* in Mexico, *papalo.* Such facts seem to show that there is a genetic affinity between Polynesian and some of the languages of America. On the other hand, Stucken is struck with numerous resemblances of Sumerian, the primitive language of Babylonia, to Polynesian: for instance, Sumerian *ku,* 'eat'; Polynesian, *kai;* Mexico, *qua;* Sumerian *gish,* 'wood'; Polynesian, *kas;* Sumerian, *nun,* 'great'; Polynesian, *nunu, nunui,* or *nui.* He gives a comparative table of over two hundred words that are similar in Sumerian and in Polynesian, and comes to the conclusion that the resemblances are too numerous to be accidental. There must be some historical connection between Polynesia and Sumer and America. One hypothesis is that the Polynesians originated in southeastern Asia and spread in two directions as far as Sumer and America. Another theory is that the Sumerians carried their commerce as far as Polynesia and established colonies there in pre-historic times. A third theory, to which Stucken inclines, is that Polynesia is the residue of a sunken continent in the Pacific. Here there originated a civilization that, with the subsidence of the continent, spread as far as Sumer in the East and America in the West. The stepped pyramid, which is found only in Babylonia, Egypt, Polynesia, and America, is a vestige of this civilization.

Small Sculptures from Babylonian Tombs.—In *Mus. J.* (Univ. of Pa.) xix, 2 (June 1928), pp. 195–212 (18 figs.), Leon Legrain discusses the above subject. A study is made of the nude female type in its significance as symbol, charm, and, finally, divinity. The influence on Greece, and of Greece in return, and the later development are treated. There follows a presentation of a number of figurines in illustration with notes and a discussion based, as Dr. Legrain says, largely on the still supreme treatise in the field, the catalog by L. Heuzey, *Figures antiques de terre cuite du Musée du Louvre.* A good digest of this rather fascinating subject is provided in Dr. Legrain's study.

The Sources of Sumerian Civilization.—In *R. Arch.* xxvii, 1928, pp. 90–104, Amélia Hertz discusses the influence of the Proto-Elamite civilization upon the Sumerians. She compares the results of excavations at El Hibba, Shurgul, Fara, and Tello with the objects found at Abou Shachrain, Moussian, and Susa. Evidently the Sumerians, when they entered Babylonia, found there a people (Proto-Elamites) of more advanced civilization than their own, as is proved by comparison of their utensils and pottery. Some of their religious practices were different; for example, the Proto-Elamites buried their dead in cemeteries and put in their tombs no offerings except objects of metal, whereas the earliest Sumerians buried their dead under their houses and deposited with them objects of stone as well as of metal. As time went on the Sumerians adopted the practices of the Proto-Elamites. Any Egyptian influence before the middle of the second millennium B.C. is impossible. The source of the Sumerian script is difficult to determine. The script was borrowed, but not from Egypt. Examples of the script of Proto-Elamites II, found at Susa, which have been in part deciphered, resemble the earliest Sumerian writing, but show that the Proto-Elamite writers borrowed their Script, as did later the Sumerians. One tablet found at Susa bears signs which may be writing of the earlier Proto-Elamites I, but this is uncertain. Discovery

of further tablets of the Proto-Elamites I may disclose the ultimate source of the Sumerian script and at the same time make known to us the earliest of all forms of writing.

Sumerians, Semites, and the Origin of Copper-Working.—In *Ant. J.* viii, 2 (April 1928), pp. 217–235 (1 pl.; 6 figs.), H. Frankfort discusses the above subject. Pottery of the kind found in the lowest layers of the Tell at Susa, with geometric decoration combined with figures of animals and men, degraded into mere geometric designs. The same culture is evidenced by pottery finds in Mesopotamia, near Assur, at Samarra, at Bender Bushire near Kish, at Abu Shahrein, and especially at Al 'Ubaid, as well as near Teheran, at Urmya, at Mohammedabad, at Seistan, and to a degree by vessels discovered in Beluchistan. The possible influence into India cannot as yet be certainly spoken about, although it appears as if connection with Persia were indicated by certain evidence in hand. This style of pottery existed in the Persian highlands for a long period. Susa I apparently was a representative of a sphere of culture including all of Persia. The second style at Susa was also more than a mere local growth. The connection between the second and the first civilization here still remains to be established. The polychrome pottery at Susa comes later than the Highland culture of Susa I. This kind of ware, which appears suddenly and does not have any established connections with what preceded it in various centres, in Palestine, Mesopotamia, Egypt, Cyprus, and Cappadocia, may have had its native home in a region centrally located with reference to these places and this place may have been northern Syria, where actually the excavations at Carchemish have revealed a 'three-colour' scheme of decoration resembling some of the polychrome pottery from Mesopotamia.

The makers of the polychrome ware apparently were a Semitic element in the Sumerian culture and to Semites or Semitized north Syrians should perhaps be ascribed the cylinder seals, and also the theriomorph and multiple vases of alabaster. Sumerians perhaps originally spreading a considerable distance northward may have been responsible for certain other remains of the first civilization. Semites coming down from the north may have mixed with these Sumerians, although their number near Sumer, where their type of pottery is scantily represented, may have been comparatively small. At all events we have reached the conclusion that both the civilizations originally found at Susa seem to belong to large areas of culture, that the older belongs to Sumerians or kinsmen of these and that the younger is that of the Semites from northern Syria.

Copper-working is the great invention of these people at Susa during the period of the first civilization. Recently evidence has come forth showing that the Armenian-Caucasian metallurgy, praised in antiquity for its excellence, employed forms and shapes which existed at Sumer in the last century of the fourth millennium. The four spatula-shaped pins with turned-over tops, two of which are of silver and the other two of bronze, discovered at Ur, serve to show the connection between the two sections of the country engaged in this industry. Further evidence corroborating the same view is afforded by closely related pins, ear-pendants, prongs, etc. Therefore, before the year 3000 B.C. there was in existence a centre of metal-working at some place south of the Caucasus with which the Sumerians had contact, and, if the people that carried the Highland culture were Sumerians, then the invention of this belongs to them.

The Tower of Babel.—In *Z. Alttest. Wiss.* xlv, 1927, pp. 162–171, E. Unger maintains that the reconstruction of the plan of the Tower-Temple of Babylon, made by Koldewey, and followed by numerous other architects, is incorrect. This reconstruction rests upon the interpretation of the word *nu-ḫar* in the inscription of

Nebuchadrezzar describing the building of the tower. This Koldewey assumes to be identical with the ordinary word *zikkurat*, 'tower-temple.' Accordingly, he regards the *nu-ḫar* as the basis of the tower, and equates it with the cubical excavation from which the original bricks have been removed that now appears in front of E-sag-ila, the great temple of Marduk. Unger holds, on the contrary, that *nu-ḫar* means 'clay platform,' and denotes the open square or area on which the temple proper stood. . This leads to an entirely different architectural reconstruction of the Tower of Babel, as begun in primitive Sumerian times, and as finished by Nebuchadrezzar.

SYRIA AND PALESTINE

The Date of the Two Temples at Byblos.—In *Archiv f. Orientforschung*, iv, 1927, pp. 57–66, F. W. von Bissing criticizes the reports of the French expedition at Gebal (Byblos) in regard to the two buildings that were excavated. These are commonly called the "Syrian" and the "Egyptian" temple, but there is no agreement as to which building is meant by each of these terms. Vincent, Montet, and Contenau contradict one another in their use of these terms. Moreover, there is no archaeological evidence to show that either building is "Syrian" or "Egyptian." The building called "Egyptian" by some on account of the colossi found in it, is not a genuine Egyptian structure; and the statue of the Ba'alat of Gebal also found in it is a very late work influenced by Assyrian art. The objects found in the second building afford no evidence that it was a Phoenician temple, or even a sanctuary of any sort.

General Semitic Characteristics in Israelite Personal Names.—In *Z. Morgenl. Ges.* lxxxi, 1927, pp. 1–45, M. Noth makes a detailed comparison of Hebrew personal names as they are found in the Old Testament and in other sources with personal names in the other Semitic languages. He finds that the most striking common characteristic is the use of names of relationship, such as *'ab*, 'father,' *'amm*, 'uncle,' *'aḫ*, 'brother,' *ḥam*, 'father-in-law,' and *dad*, 'paternal uncle,' as titles of divinities in compounding personal names. In all the dialects these names are most frequent in the earliest times and steadily decline in frequency until they disappear, except as they occur through paponomy. This leads to the conclusion that names of this type belong to the earliest period, before the Semites migrated out of their original common home. The use of names of relationship, as divine titles, accordingly, was the outcome of religious conceptions that arose out of the conditions of primitive nomadic life.

Semitic Alphabet on Sarcophagus of Aḫīrām.—In *Mélanges de l' Université Saint-Joseph* (Beyrouth), xii (1927), 1, P. Sébastian Ronzevalle presents a more complete study (with very clear plates) of the Semitic alphabet as found in the inscription on the sarcophagus of Aḫīrām, which entered the literature about the origin of our alphabet.

Syrian Astartes, etc.—In *Mélanges de l' Université Saint-Joseph* (Beyrouth), xii (1927), 3, P. Sébastien Ronzevalle continues his "Notes et Études d'Archéologie Orientale." He presents descriptions (with plates) of several Syrian Astartes and a goddess-mother of Beyrouth; also of a cylinder formerly in the collection of Comte Michel Tyszkiewicz, but since 1898 in the Boston Museum. Reinach, Furtwängler, Messerschmidt, and Ward (in *A.J.A.*, 1899) described and interpreted the symbolism on the cylinder as Syro-Hittite. On the basis of photographs made by the Boston Museum for the writer, he minutely describes the work and interprets it as presenting "un tableau théogonique établi sur le théme general 'syro-anatolien' du meurtre et de la renaissance du médiateur céleste."

The Ten Commandments Originally a Rock-Inscription.—Most of the early

Hebrew religious institutions have been illuminated by the discovery of similar institutions among other peoples of the ancient Orient, but the Ten Commandments as a portable code, carried about in a chest, the ark, has no analogy elsewhere. This fact and the non-mention of any such law-code in early Hebrew literature have led many critics to doubt whether there ever really were any inscribed tablets in the ark. In *Arch. Rel.* xxv, 1927, pp. 220–224, B. Gabirol claims that the story that the tables in the ark were a *duplicate* suggests that the original code was a rock-inscription at Sinai. The forty days that Moses took to write it were due to the necessity of inscribing it on the rock. The duplicate was made because Israel had to leave Sinai, and wished to have a copy of the code. When they entered Canaan, according to *Deut.* 27: 2–8 and *Josh.* 8: 32, they again carved the code on a rock as at first. The tablets in the ark were destroyed at the time of the capture of the ark by the Philistines (I *Sam.* 4). Hence the origin of the story that the original tablets were broken at Sinai, and the disappearance of the tablets from Hebrew history.

ASIA MINOR

A Lydian Text on an Electrum Coin.—An electrum coin belonging to Mr. A. B. Cook, at Cambridge, is published and compared with other coins of the same lion type by W. H. Buckler in *J.H.S.* xlvi, 1926, pt. i (pp. 36–47). It shows for the first time that the dies used in stamping the obverse of the third-of-a-stater and sixth-of-a-stater electrum coins had two lions' heads confronted, with the inscription between them, but because the dies were much too large for the amount of metal used, only one lion's head is impressed, except in the case of this one specimen. The inscription also is more complete here than elsewhere. The Lydian sign ⟩ (ś), which is not known in any Ionian alphabet, proves that this is a Lydian word. It is to be read *valves*, probably pronounced *walwesh*, but that it represents the name of King Alyattes is by no means certain.

The New Neo-Phrygian Inscriptions.—Ten additional Neo-Phrygian inscriptions which were discovered in 1912 and 1913, with revisions of some previously known, are published by W. M. Calder in *J.H.S.* xlvi, 1926, pt. i (pp. 22–23). Some notes on these as well as on certain Old Phrygian texts, by A. H. Sayce, appear in the same issue (pp. 29–35).

The Sword-God.—In *R. Arch.* xxvii, 1928, pp. 107–135 (21 figs.), Paul Couissin discusses the sword-god of Iasili-Kaïa and the cult of the sword in antiquity. One of the figures of the great rock-cut relief at Iasili-Kaïa has a human head surmounted by a conical cap, the fore parts of two lions where the shoulders might be expected, and below the shoulders two lions, head downward. Below these lions is a support which has been interpreted in various ways, but is without doubt a sword-blade. The lions and the human head form the hilt of the sword, and the whole represents the sword-god or the sword as an object of worship. The blade is apparently not triangular, and it has the axial reinforcement common in bronze blades, though its form is elsewhere hardly met with before the Celtic swords of the late Bronze Age. Analogies for the various parts of this sword are found in various countries. The worship of the sword was at first a worship of the weapon itself, or rather of the magic power residing in the weapon. In course of time, as religion became more anthropomorphic, the human form (and animal forms) were added to the sword, and finally the sword became merely an attribute of the god. The Hittites of Cappadocia probably received the use of iron from the inhabitants of the Caucasus, and with the use of iron they received the sword and the worship of the sword. This would account for the fact that they, highly civilized as they were, represented the sword-god in such primitive fashion. At that time, the thirteenth century B.C., they had but recently received the cult from the Caucasus.

GREECE

Cadmus and the Spartoi.—In *R. Arch.* xxvii, 1928, pp. 278–292, Georges Poisson discusses the origin of Cadmus and the Spartoi. The word *spartos* (*Sparton, Sparta*) is Asiatic, identical with *Sardes* (*Sfard*). Cadmus and the Spartoi are of Asiatic origin, presumably from Asia Minor. The various parts of the Theban legend, when carefully interpreted, bear out this theory.

Certain Greek Cloaks.—In *R. Ét. Gr.* xl, 1927, pp. 1–16 (7 figs.), Leon Heuzey (posthumously) discusses the Greek cloaks, the *epitaphis* and the *zeira*. The *epitaphis* or *ephestris*—both terms are late—was an over-mantel fastened on the shoulder by a clasp (fibula). The terms are occasionally used by Greek historians to designate foreign cloaks, especially the Roman *sagum*, or *paludamentum*. Even in Thessaly, home of the *chlamys*, the longer *epitaphis* was worn, as being better against the cold. An illustration and contrast with the *chlamys* is furnished by a monument (Fig. 1) found in Macedonia. Comparison is made with the Homeric *chlaïné* (Fig. 2, from a b.f. vase,—*Mon. dell' Inst.* II, pl. 22). Various materials were used, sometimes richly dyed and even embroidered.

The *zeira*, a Thracian clasp-garment reaching to the ankles, is characterized by a collar falling as much as one-third the length of the garment, and by heavy felt-like material often hanging woven in patterns, particularly crenelation. The Thracians seem (Xen. *Anab.* VII, 4) regularly to have worn the fox cap (*alopekis*) with this cloak. But at Athens the *petasos* was sometimes worn with it by the young cavalrymen (*cf.* the Parthenon frieze). Heuzey believes these to have been Athenian youths (he discusses the matter from vases, etc.), a style reflecting the Thracian expedition of 465, thus showing the interaction of military history and art. Military history shows continuously examples of such borrowing of fitting costume, even from the enemy.

The Death of Heracles and Life in the Lower World.—In *Rend. Acc. Lincei*, serie sesta, iii (1927), pp. 529–570, G. Patroni writes on the death of Heracles and certain aspects of life in the Lower World. He emphasizes the points of resemblance between the *eidolon* of Heracles in Hades (Homer *Odyssey* XI, 601–627), "looking like black night and holding his bare bow with arrow on string, ever about to shoot," and that of Iphthime sent to Penelope as a dream (*Odyssey* IV. 795–841). Homer (*l.c.*) speaks of the hero himself, in contradistinction to his ghost, as feasting with the immortals in heaven and having Hebe to wife. Patroni disagrees with Mingazzini, who argues that Heracles' death on the pyre on Mt. Oeta (where a place of sacrifice has actually been found with two inscriptions bearing the name of Heracles) must have been unknown to Homer, and was probably a later addition to the myth. Our author sees no necessary contradiction to the supposition that Homer did know of Heracles' death on the pyre, in *Iliad* XVIII, 117–119, where the statement is made that the mighty Heracles, though very dear to Zeus, did not escape death, for Hera's wrath subdued him. He thinks that Heracles' ψυχή, a heavenly body, was translated from the pyre to the abode of the gods, whence he exerted a control over his *eidolon* in Hades.

Four Cults of Thasos.—In *B.C.H.* li, 1927, pp. 178–233 (2 figs.; pls. IX, X) Henri Seyrig discusses at great length the cults on the island of Thasos of Apollo, Herakles, Dionysos, and the Egyptian gods. A section of the article is devoted to each cult. The first (pp. 178–185) is devoted to Apollo. There were two distinct sanctuaries of this god at Thasos, the earliest being to the Pythian god. This was on the acropolis, and has been excavated, and although no evidence has been found as to the nature of the cult, its importance can be determined by its size and position. To this sanctuary doubtless belonged the colossal archaic statue of a crio-

phoros recently discovered. The second sanctuary of the god, in his capacity as Nymphegetes, was in the lower city. More is known about this cult, from the reliefs of Apollo and the Nymphs discovered many years ago, on which the regulations for sacrifice were inscribed. With Apollo and the Nymphs, the Graces were also associated, and divided the sanctuary. For him as leader of the Nymphs, the singing of the paean was forbidden in this sanctuary. The origin of the cult was rural and probably indigenous and pre-Hellenic, Apollo being added in Hellenic times.

The second portion of the article (pp. 185–198) deals with the cult of the Thasian Herakles. Among the Greeks, Herakles was a hero, not a god; and the writer cites the passage from Herodotos (II, 44) where the Thasian cult is spoken of as founded by the Phoenicians. The position of Herodotos is upheld in part by the author, who takes the view that the Greek Herakles absorbed the earlier cult, which was already in existence when the Greeks from Paros colonized the island. The importance of the ritual of the Thasian Herakles in the inscription published by Picard (*B.C.H.* xlvii, 1923, p. 241) is especially emphasized.

The third section (pp. 198–219) deals with the cult of Dionysos and the Thracian rider, and is the most important part of the article. In this connection, a fragment of Doric frieze, showing two metopes, one of a Thracian horseman, and the other of a warrior, now in Constantinople, and bearing a dedicatory inscription, obviously to Dionysos, is published. With this fragment, another, now lost, bore a relief of Dionysos. The finding-place of these fragments, which have been known for some time, was just where the sanctuary of Dionysos has recently been discovered, and they were from a votive shrine or treasury. The period of the inscription is of the early third century B.C.: the sculptures, however, are Roman. The writer asserts that the Thracian horseman is another way of representing Dionysos, and mentions other instances to prove his point. This form seems to typify Dionysos in the aspect of the mysteries connected with his cult, and is found on other monuments from Thasos, and of these a stele is here published for the first time. This stele, set up by one Auphonius Thersilochus and Auphonia Helikion, shows the man as Dionysos the Thracian rider, and the woman as Persephone the goddess of the dead. It belongs to the period of Caracalla, and suggests strongly the influence of the mysteries. Two celebrations of Bacchic mysteries in Thasos are known to us from inscriptions as existing into the period of the two monuments here published; the *πρὸ πόλεως βάκχειον* and the *ἱερώτατον νέον βάκχειον*. It is to the latter of these that the stele probably belongs. It is a matter of regret that so little has been discovered of the worship of Dionysos at Thasos in classical times and earlier, as it ought probably to be considered an indigenous cult, of the Thracians, who originally inhabited the island, and left many vestiges of their presence.

The last part of the article (pp. 219–233) deals with the Egyptian gods. A long inscription, found in 1924, is published for the first time, with translation and commentary, regarding the cult of Serapis, and belonging to the second century B.C. The predominance of Asiatic influence on the Thasians is shown, in coins, sculpture, and religion. We may infer from various names of individuals in Thasos, that besides Serapis, other Egyptian gods, such as the deified Nile, Isis, etc., were also worshipped. In Hellenistic times, the existence of commerce between Thasos and Naucratis, at the delta of the Nile, is proven by stamped amphorae, showing trade in wine and oil. It was through this commerce with Naucratis, which it is suggested went back several centuries before Hellenistic times, that the familiarity of Thasos with the Egyptian gods was engendered.

A Funerary Diadem of Gold.—In *R. Arch.* xxvii, 1928, pp. 25–35 (pl.; fig.),

W. Deonna publishes and discusses a funerary diadem of gold in the museum of Geneva. It was acquired in 1925 from a private collection and is said to have been found in Etruria. It consists of a band of thin gold, 0.284 m. long and 0.043 m. wide. Small myrtle leaves of gold, only 32 of which remain, were attached to the sides. The band is decorated in repoussé with figures between bands of ornament. The angle at the right is now empty; then follow a seated sphinx and a palmette; then a cortège facing to left, consisting of three draped women, a woman and a bearded man with a lance, three draped persons, a chariot, above which a beardless head is visible, behind the croupe of the horse three beardless persons and a bearded man all facing to right, by the horse's head a bearded man facing left, before the horse two bearded men facing right and holding lances, and three draped figures facing right; then a Doric building with two columns *in antis* and a domed roof. Between the columns are three vases. To the left of all these is a boat with mast and sail and five rowers, and in the angle at the left end an indistinct decoration. The building resembles closely the two buildings on the François vase, and the style of the work is so like that of the François vase that the date of about 570 B.C. and Attic workmanship are to be assumed. Whether the scene represented has to do with a funeral or is susceptible of a mythological interpretation is not clear.

ARCHITECTURE

The Plan of the Maussoleum.—At the January (1927) meeting of the Berlin Archaeological Society, F. Krischen presented an elaborate mathematical calculation of the original architect's plan of the Maussoleum in full detail, taking as the basic measurement one hundred Anatolian feet and following the ancient custom of dividing into halves, quarters and eighths, not tenths. The results arrived at by regarding the known simple proportions used by Greek architects are strikingly confirmed both by the actual remains and by the dimensions given by Pliny. In only one case is it necessary to assume that 'feet' in Pliny's text is a mistake for 'cubits.' (*Arch. Anz.* 1927, pt. 1–2, cols. 162–169; 5 diagrams)

SCULPTURE

The Aphrodite with the Dove.—In *R. Arch.* xxvii, 1928, pp. 195–196, Em. Espérandieu shows that the Aphrodite with the dove in the museum at Lyons was not, as has been believed, found at Marseilles, though it was in Marseilles in the second half of the eighteenth century. It is described (No. 143) in a manuscript catalogue of the collection of the Abbé Pichony at Nîmes, whose collection, formed in the early part of the eighteenth century, contained objects from various sources. This statue, an Ionian work of the sixth century B.C., may very likely have been brought from Egypt.

Arcadian Bronze Statuettes.—In *B.S.A.* xxvii, Session 1925–1926, pp. 133–148 (2 pls.; 3 figs.), Winifred Lamb lists and discusses Arcadian bronzes. The Main Arcadian Style (seventh and sixth centuries) is characterized by short, thick-set figures and large heads; the subjects are shepherds and peasants, occasionally Hermes or some other deity. Twenty-one such bronzes are described, and nine of other types are added. The Fifth-Century Arcadian group comprises bronzes reflecting those motives which the leading artists of the time had made popular, but each bronze shows clearly its Arcadian origin. Ten such figurines are listed, and to these are added three male figures of the second half of the fifth century, also a dead fox and an eagle. Probably most of the earlier bronzes were made in the southwest part of Arcadia, in the region round Mount Lycaeus. Tegea may have been the centre of production of the fifth-century bronzes, though possibly their production was not limited to one place.

Chian Mask of Artemis.—In *R. Ét. Gr.* xl, 1927, pp. 224–233, W. Deonna discusses the Chian mask of Artemis with double expression ascribed by Pliny (*N.H.* xxxvi, 12) to Boupalos and Athenis. The author offers an explanation different from that given by Collignon (*ibid.*, 1901, p. 1 ff.) for the *facies in sublimi posita, cuius voltum intrantes tristem, abeuntes exhilaratum putant.* Deonna believes that the goddess protected an entry, a gateway, perhaps of the city, and that a mask of menacing aspect was above the exterior of the gate, while another of benign countenance, was set above the interior. It is possible also, though less likely, thinks the author, that the face may have been a *gorgoneion* of the *acroterion* type, above the gate.

DELPHI.—The Frieze of the Siphnian Treasury.—In *B.C.H.* li, 1927, pp. 1–56 (pls. I–VII; 13 figs.), G. Daux and P. de la Coste-Messelière discuss the dimensions and composition of the frieze of the Treasury of the Siphnians. After a brief preface (pp. 1–5) for which both authors are responsible, the article is divided into two parts: the first (pp. 5–26), by M. Daux, deals with the dimensions of the rectangle of the frieze; the second, by M. de la Coste-Messelière (pp. 27–56), takes up the composition of the sculptures, and the position of the extant pieces in relation to one another. Each of these two parts is again subdivided. To establish his dimensions of the frieze, M. Daux is obliged to study the dimensions of the treasury from the euthynteria up, and consider its restoration *in toto*, in order to establish the correct position of the frieze above the epistyle. His conclusions place the frieze between the Ionic and the Lesbian mouldings associated with the treasury. His measurements conform for the most part with those of Courby and Dinsmoor, but his conclusions are often at variance with them. M. de la Coste-Messelière, in discussing the proper placing of the sculptures, takes up each side separately, beginning with the north, to which six pieces are assigned, then the east (four fragments), the south (five fragments), and finally the west, two pieces of which are preserved. This article is a prelude to a more complete study of the entire building, to appear in the *Fouilles de Delphes.*

A Greek Marble Head of a Horse.—A head of a horse, of yellowish-white marble, now in private possession in England, is published by R. Hinks in *J.H.S.* xlvii, 1927, pt. ii (pp. 218–221; pl.; 4 figs.). The technique is evidently Greek and of a good period. The close-cropped mane with top-knot is not distinctive in date, but in comparison with other Greek heads, from the horse of Selene on the Parthenon (440 B.C.) to that of Dexileos (395 B.C.), the flat cheeks and slightly concave profile of the nose suggest that this is the work of a pupil of Phidias working in the last two decades of the fifth century.

A Marble Statuette.—In *B.S.A.* xxvii, Session 1925–1926, pp. 149–150 (fig.), H. W. Law publishes a marble statuette in his possession. It is of coarse-grained marble, probably Parian or Naxian. Its total height is 0.376 m. The head, the legs from about the knees, and nearly all the right arm are wanting. In the left hand is a mask—apparently a comic one—in the back of which a small portion of lead pipe is inserted. The date proposed for the figure is the first century B.C. Whether Eros or a satyr is represented is uncertain.

The Parthenon Pediments: How the Work of Phidias Was Accomplished.—To refute the objections raised by L. Curtius against the probable dates that have been assigned to the East and West pediments of the Parthenon, P. Johansen discusses the conditions of work of a great sculptor in the fifth century B.C., as compared with those of a modern artist, such as his greater freedom from hampering external influences, and the greater ability and trustworthiness of his assistants, and shows how much of the actual execution of the creations of Phidias may reasonably be assigned to his own hand, illustrating by a discussion of the methods of

Michelangelo, especially in the statues of the Medici Chapel of San Lorenzo, the dates for which are known. (*Arch. Anz.*, 1927, pt. 1–2, cols. 50–48)

The Thermon Metopes.—In *B.S.A.* xxvii, Session 1925–1926, pp. 124–132 (3 figs.), H. G. G. Payne presents some observations on the metopes from Thermon. He calls attention to some technical details, such as the use of red and black outlines for female and male flesh respectively. The metope with Chelidon, Aedon, and Itys has been correctly interpreted; the metope with the three seated goddesses forms only part of a scene, perhaps the Introduction of Heracles or the Birth of Athena; and the metope with two seated figures is also dependent upon another to complete its meaning. An unpublished fragment (a leg and left foot of a running female figure) is interpreted as part of one of the Gorgons pursuing Perseus, and the coloring of the Perseus metope is discussed. The hunter metope is compared with vase paintings, as are also the Gorgoneion and the fragment with a lion's head, and the conclusion is reached that the metopes are to be assigned to the period of transition from the Proto-Corinthian to the Corinthian style, that is, probably, to the years between 650 and 630 B.C. An unpublished fragment of a winged figure is interpreted as "Typhon."

PAINTING

Euphronius.—In publishing anew the "swallow vase" in the Hermitage Museum—a red-figure peliké by Euphronius, found in Vulci in 1835 and published at that time in the *Monumenti*—O. Waldhauer compares it with the very similar black-figure peliké in the Museo Gregoriano on which are two scenes with a dog, and discusses the strongly marked characteristics of the artist: his fondness for making a scene tell a story, his interest in a composition as primarily a decoration for the vase, and the total absence of any effect of perspective in his work. He was a great artist, not an innovator, belonging heart and soul to the era of Pisistratus, and his work has the charm of a dawning renaissance, like that of Taddeo Gaddi. (*Arch. Anz.*, 1927, pt. 1–2, cols. 70–75; 2 pls., 2 figs.)

Macedonian Vase.—In *Ann. Arch. Anth.* xiv, 3–4 (Oct. 1927), pp. 117–118 (1 pl.), R. W. Hutchinson discusses a vase in the Free Public Museum, Liverpool. The vessel measures 8½ in. long, 7½ in. wide, and 3⅜ in. high to the top of the sides and 4½ in. high to the top of the raised handles. It is hand-made of coarse red clay blackened on the outside, well baked and polished. The running spiral decoration and its history are discussed and its relationship with lower Danubian and Macedonian ware.

The Origin of the Representation of the Human Figure in Greek Art.—In a very long and important article (*B.C.H.* l, 1926, pp. 319-382; 25 figs.), W. Deonna discusses the beginnings of human representation among the Greeks, in an attempt to trace the steps by which the knowledge of anatomy grew, until in the beginning of the fifth century B.C. it had arrived at a very high stage of development. The point of departure is the pottery and similar objects of the geometric period, where a more or less schematized representation is found. The object is to trace, if possible, the origin of this conventional rendering. The theories in this connection of Pottier, Walston, and Cahen are particularly examined. But, while conceding the ties that bind the geometric civilization to the Aegean, it is suggested that they are perhaps exaggerated, and that there was a spontaneous development, somewhat, perhaps, influenced by the preceding cultures, but not entirely in their debt. To prove this point, it is shown that the influences cited by Cahen to establish the dependence of geometric art on Minoan models, can be used equally well to support the theory of a simultaneous spontaneous development, influenced only distantly, if at all, by the Aegean culture. This is especially true as regards costume, several

instances being discussed. But in the case of the delineation of the human form, it is shown that one of the most noteworthy traits of the geometric style is the representation of the torso in the form of an inverted triangle. By means of illustrations as well as text, it is established that this is a characteristic of primitive art in all parts of the world, and of the crude drawings of children. This triangular manner of delineation is also found in representing other parts of the body, and applies to animals as well as human beings. When drapery is to be indicated, the triangle points upward, or two triangles are joined, point to point. Often not merely the torso, but the entire body as a unit, is conceived in a triangular scheme. Side by side with this we also find a rectangular scheme in primitive art, which is often combined with the triangular, in the same figure, the head being rendered in one manner, the torso in the other. As a result of comparisons with other primitive art, the suggestion is made that it is not necessary to admit a direct influence of Aegean art on the Dipylon style, but rather that they are both subject to impulses spontaneous in the art of all primitive peoples. This is proven by the fact that the human representations in Crete in this geometric triangular form go back to M.M. I and II, where striking resemblances to Dipylon ware may be found, and the pottery of Phylakopi is also cited, which dates in E.M. II and III, and M.M. I. In the later Minoan fabrics a more naturalistic style is found. The same truths hold for Cyprus as well as for Crete. These facts show that in Pre-Hellenic art there was a schematized geometric human type, analogous to that of the Dipylon, but having no influence upon it, owing to the centuries that separate the two periods. By means of a most enlightening series of cuts, it is shown that this triangular type of human representation existed in Pre-Dynastic Egypt, and in the early art of the Elamites and of Mesopotamia, showing that in all these countries as well as in Pre-Hellenic Greece, the beginnings of human representation start in the same way. There is consequently no reason to suppose that the new art of Geometric Greece will not take the same form of development, without necessarily being in the least influenced from outside. It must also be remembered that a lapse of from two to three centuries for which archaeological research is not as yet able to account, separates the Pre-Hellenic and geometric ages. Moreover, the earliest picture of the human form of the geometric age is not until the developed Dipylon style of the eighth century B.C., and this militates against a Pre-Hellenic influence, and in favor of an independent evolution. A similar development is also found in Etruscan geometric wares and in early art in central Europe and Georgia, all arising independently of each other. In Greece, the triangular types continue to survive through the earlier techniques of vase-painting, and distinct survivals can be seen in the black-figured and red-figured styles, in archaic sculpture, and even in the school of Polykleitos. The conclusion is therefore reached that the art of the Dipylon ware was a native creation of Greece, based on conventions common to all primitive art, and with no necessary tie to previous cultures.

Testing and Sale of Oil on Painted Vases.—In *R. Arch.* xxvii, 1928, pp. 233–239, Bernhard Laum discusses anew the vase paintings discussed by F. J. M. de Waele, *ibid.* xxiii, 1926, pp. 282 ff. He interprets the paintings as scenes of testing, not selling, oil. The little rods are not siphons, but *kalamiskoi*, and are used to put a drop, or a few drops, on the hand or arm of the purchaser in order to test the quality of the oil as an unguent.

COINS

Names of Caesars on Greek and on Roman Colonial Money.—In *Num Zeitsch.* 59 (1926), N.F. 19, pp. 1–70, R. Muensterberg gives valuable lists of the forms in which the Roman imperial names appear on coins, and in the following

number, 60 (1927), N.F. 20, pp. 42–105, a corresponding list of the names of Roman officials on Greek coins.

INSCRIPTIONS

Cyprian Inscriptions.—In *B.C.H.* li, 1927, pp. 138–154 (1 fig.), Henri Seyrig publishes thirteen inscriptions from different parts of the island of Cyprus. These inscriptions have all been previously published in local Cypriote periodicals, not readily accessible outside of the island. Of these, No. 4 is in Latin, the rest are in Greek. Nos. 1–5 are from Nea-Paphos, No. 6 from Citium (the modern Larnaca), No. 7 from Salamis, Nos. 8–10 from Arsos, Nos. 11–13 from Kerynia. Of the thirteen, Nos. 3, 5, and 7 are the most important. All date in the Roman imperial period, mostly in the second and third centuries of our era.

Decrees.—In *R. Ét. Gr.* xl, 1927, pp. 214–223, under the general heading, *Epigraphica*, Leon Robert discussed: III. *Isopoliteia* between Pergamos and Temnos (Fränkel, *Insch. v. Perg.*, 5), presenting a study of some of the rights involved in this decree; IV. An inscription from Delphi, on a decree by the Delphinians in honor of Athenian Dionysiac *Technites* (first published *B.C.H.*, 1906, p. 277),—a new restoration is attempted; V. Decree of Priene on the cult of Egyptian gods (*Insch. v. Priene*, 195). The decree concerns the expenses for the cult sacrifices the 20th of Apatouria, and the choice, by the priest, of the cult officiant from those eligible.

DELOS.—Two Graffiti.—In *B.C.H.* li, 1927, pp. 234–243, A. Severyns discusses two graffiti, previously published, and found in the excavations at Delos. The first, found in 1894, on a wall of the "House on the Lake," has been published several times; first by L. Couve in 1895, and then in 1924 by J. Chamonard. The writer of this graffito was obviously a native of Antioch on the Maeander, and it must have been written after the rebuilding of the city by Antiochus I Soter, 281–260 B.C. It is shown that it is metrical, consisting of an iambic tetrameter and an iambic trimeter. It cannot be a quotation, on account of the poor language, but was probably the work of a homesick Carian slave. The second graffito is in the "House of Dionysos," and was discovered by J. Chamonard in 1904, and published by him in *B.C.H.* xxx, 1906, pp. 552–553. The writer suggests some new readings of this graffito, and gives it a date certainly later than the sack of Delos by the generals of Mithridates in 88 B.C., and perhaps in the Christian period.

DELPHI.—The Law of Cadys.—This inscription, published by the late Theophile Homolle in *B.C.H.* l, 1926, pp. 3–103 (for a summary of this article, see *A.J.A.* xxxi, 1927, pp. 491–492), is discussed by Theodore Reinach in *B.C.H.* li, 1927, pp. 170–177. The writer believes that the conclusions arrived at by Homolle, and before him, by Bourguet, are not altogether satisfactory in certain particulars, notably the maximum rate of interest to be charged on loans, and the penalties for infractions of the law. It seems certain that the Delphian standard of 70 drachmae to the mina was the standard to which the law applies, giving a maximum interest rate on loans of about 8.57 per cent. As regards penalties, a different reading and interpretation of that part of the inscription is offered, showing that the penalty for charging excessive interest on loans of less than a mina was a fine of 20 drachmae, but that short term loans up to 6 staters could be made at a rate of ¼ obol for every stater per month, corresponding to a rate of 25 per cent per annum.

The Delphic Paean to Dionysos.—In *B.C.H.* l, 1926, pp. 263–304, W. Vollgraff continues his series of articles on this subject. (See *A.J.A.* xxx, 1926, p. 490, for references to previous articles.) After giving a list of emendations and corrections supplied him by M. Roussel of the French School at Athens, the author

takes up the discussion of Strophe X, to which the entire article is devoted. This strophe throws a new light on certain aspects of the history of Delphi, and through its evidence a date after 340 B.C., perhaps 339, is assigned to the destruction by fire of the temple of Apollo, and the erection of the new sanctuary, the one which was described by Pausanias. The second half of this strophe is unfortunately very fragmentary, and an attempt is made to reconstruct the text. The series of articles on this subject will be continued.

Epidaurian Stele.—In *Sitzb. Preuss. Akad. Wiss.* (Berlin), xxvi, xxvii (1927), pp. 277–301, Ulrich Wilcken publishes a new transliteration of the Epidaurus stele previously discussed by him in Volume xviii of the *Sitzungsberichte*, and recording the federation of Greek states formed in 302 B.C. under Antigonus Monophthalmus and his son Demetrius. Since then Hiller von Gärtringen has discovered a new fragment and Wilcken's supposition that this might be inscribed on the reverse side has proved correct. More careful readings with the help of Dr. Klaffenbach in Epidaurus have also cast new light on the inscription. Kabbadias had put its date in the time of Antigonus Doson and Philip V, but the new fragment twice bears on the *recto*, as the largest fragment had on the *verso*, the name of Demetrius, once in connection with that of Antigonus. It is, therefore, now certain that both sides dealt with the same treaty, and that Wilcken's dating of the inscription was correct. Klaffenbach on epigraphical grounds, *e.g.*, the existence of the Ξ with the bar across the lines, had also declared for the earlier date.

Kallias Decree.—In *Sitzb. Preuss. Akad. Wiss.* (Berlin), xxviii (1927), pp. 319–330, W. Kolbe discusses at length the dating of the Kallias decree. Differing from August Boeckh and Julius Beloch, who thought that such a decree could not have been passed in the years immediately preceding the Peloponnesian War, when the finances of Athens were in a very flourishing condition, and therefore placed it after the Peace of Nicias, Kolbe agrees rather with Kirchoff and Eduard Meyer in dating the decree 435–434 B.C. More careful readings and emendations of the inscription by scholars like Adolf Wilhelm and Hiller von Gärtringen, as published in the new Corpus (*I.G.* I ², editio minor (1924)), have made this date quite certain, he thinks. The decree on the back of the stone, as dealing with payments by the ταμίαι τῶν ἄλλων θεῶν, Kolbe thinks is of the same date and finds additional proof of his thesis in references to golden statues of Nike and the construction of the Propylaea, expenditures which can only have been made before the disasters of the Peloponnesian War had depleted the treasury.

PANAMARA.—Inscriptions.—In *B.C.H.* li, 1927, pp. 57–122, J. Hatzfeld publishes one hundred and thirty-nine inscriptions from this site, found and copied by the late G. Cousin and G. Deschamps in 1886, when they discovered the sanctuary of Zeus Panamaros. They fall into the following four classes: I, Decrees and regulations (1–10); II, Invitations to various cities (11–25); III, Dedications and commemorations of priestly colleges, priests, and priestesses (26–132); and IV, Miscellaneous inscriptions (133–139). For the most part, these inscriptions belong in the Roman imperial period.

The Mysteries.—In *B.C.H.* li, 1927, pp. 122–137, P. Roussel comments in particular on that series of inscriptions from Panamara published by Hatzfeld in the article immediately preceding, which consist of invitations to various cities to take part in the worship of Zeus Panamaros. The resemblance to the announcements of the hierophants of the celebration of the Eleusinian mysteries is especially pointed out. This leads to the conclusion that "mysteries" were also celebrated at Panamara. Three great festivals were observed—the Panamareia, the Komyria, and the Heraia. Of these the Panamareia need not be considered, as it appears to be of late origin. At the Komyria, women played a minor rôle, while the

Heraia seems to have been essentially a women's festival. The Komyria seems to have been of great antiquity, going back to the rude days of the Carians, and to have had a banquet as its principal event. From this barbaric symposium the later mysteries developed. The women's festival always appears to have been of secondary importance. These mysteries, however, did not necessarily limit themselves to the periods of the two festivals, but could be held at any time. We are ignorant of the nature of the initiation, and whether, in such initiations, the sexes were segregated. The invitations to the mysteries were sent out by the priest, speaking in the name of the god; and were not confined to the festivals above named, so that pilgrims from other places could present themselves for initiation at any time. A national character is indicated by the fact that Zeus Panamaros was identical with Zeus Karios, the patron god of Caria, and that the priests invoked special blessings on the cities of their nation. On the other hand, there is an attempt at universality—to make the god out as a benefactor to the entire human race. The principal part of the mystery at all times was a banquet, at which the initiates were supposed to be dining in company with the god. The article ends with suggestions of influence from the Hebrew worship in this Carian cult.

Religious Regulations.—In *B.C.H.* l, 1926, pp. 305–318, P. Roussel comments on several religious inscriptions previously published elsewhere. The first, concerning the Asklepieion of Pergamon, is published by Zingerle in the *Strena Buliciana*. Roussel is not entirely in accord with this publication, adopting some of its views, rejecting other emendations and restorations, and making several new conjectural readings. He next discusses briefly two similar documents from Delos, and then republishes and comments on a text relating to the sale of a priesthood from Samothrake. Finally he takes up a *lex sacra* found at Cos and makes several restorations in the text.

THESPIAE.—Inscriptions.—This article, in *B.C.H.* l, 1926, pp. 383–462 (6 figs.), the sixth that has appeared on the epigraphical material from this site, found in the excavations conducted by P. Jamot and the late A. De Ridder in the years 1888–1891, is written by A. Plassart. In a footnote, references are given to the previous articles, and two further papers dealing with the remainder of the inscriptions are promised. This article is devoted to dedicatory texts of a religious or honorary character, and to boundary marks of sacred precincts. One hundred and twenty-five inscriptions are listed, divided into the following groups: I, Archaic texts in the epichoric alphabet (1–5); II, Boundaries of sacred precincts (6–13); III, Dedications of buildings (14–15); IV, Collective dedications (16–18); V, Bases of statues of divinities or mythological personages (19–21); VI, Dedications of offerings by priests and individuals, many of which are to Artemis Eileithyia for a safe delivery in childbirth (22–53); VII, Bases of honorary statues of individual Greeks, and signatures of sculptors (54–71); VIII, Bases of honorary statues of Romans (72–85); IX, Bases of statues of Roman emperors and members of the imperial family (86–104); X, Fragments of dedications of various periods after the archaic (105–125). Each of these inscriptions is given a commentary according to its importance, and some of them are of very great interest, particularly the archaic inscriptions and some of the dedications of buildings and honorary texts.

ITALY

ETRURIA.—In *Rend. Acc. Lincei*, serie sesta, iii (1927), pp.2 73—290, L. Ceci, in the third of a series of articles on Rome and the Etruscans, after criticizing Carl Schuchhardt's theory of the indigenous origin of the Etruscans and Pareti's identi-

fication of them with the Villanovans of Emilia, discusses not only the words *vinum* and *asinus* but the things themselves. Convinced as he is of the Lydian origin of the Etruscans, he thinks that they brought the vine and the ass with them into Italy. The words, too, he regards as West Asiatic, or perhaps Hittite, certainly not Indo-European. Even to the Greek οἶνος was, he thinks, a foreign word, who gave it a masculine form, while the Romans made it neuter on the analogy of *malum*, *pirum*, *pomum*, etc. *Asinus*, with its non-Latin preservation of intervocalic 's,' is to him the "Asian animal," using Asian in its original restricted sense, like the Homeric Ἀσίῳ ἐν λειμῶνι Καϋστρίου ἀμφὶ ῥέεθρα, and not referring to Asia Minor. Even the word *mulus*, with an older form *musclos* (*cf.* Gr. μυχλός), he derives from Mysia. The article teems with etymological lore, much of which seems reasonable, even if problematic.

The Technique of Pompeian Wall-Painting.—At the April (1927) meeting of the Berlin Archaeological Society, O. DANNENBERG reviewed the various opinions that have been advanced, since the discovery of the Roman paintings in the Baths of Titus in the early years of the sixteenth century, as to the process employed by the ancients in making their extraordinarily permanent wall-paintings, whether fresco, encaustic, or a process with resin or some other unknown medium. Through study and experiment he had himself developed a process which seems to give the same result as the ancient work. This begins with a very careful and thorough preparation of the ground; then specially prepared colors are applied on the wet plaster; and the surface is then rubbed over with a warm iron, which gives the necessary gloss and transparency. In those Pompeian paintings in which the figures and the ground are in the same plane, this finish, however produced, is carried over the whole surface; in those which have the figures in relief, only the background is polished, the raised figures being left dull. But in both cases a final thin coating of wax was applied, for protection and also, in the case of the raised figures, to give unity to the whole effect. (*Arch. Anz.*, 1927, pt. 1/2, cols. 178–180).

ARCHITECTURE

A Military Altar.—In *R. Arch.* xxvii, 1928, pp. 309–319 (4 figs.), MARCEL DURRY describes and discusses a military altar in the garden of the Villa Medici in Rome, where it until recently served as the base of a statue. It is hexagonal. One side is plain; on the others are reliefs which have suffered from exposure. One of these represents an officer sacrificing, the four others *vexillarii* wearing bearskin headdresses. The altar once belonged to one of the military barracks of Rome. It was probably erected by horsemen of the pretorians (*equites praetoriani*, *speculatores*, or *evocati*) and belonged to one of the elegant *aediculae* which were consecrated to the *genius turmae*.

SCULPTURE

Ara Pacis.—In *Jh. Oest. Arch. I.* xxiii, 2 (1926), pp. 53–61, E. LOEWY inclines to believe that the sculptor of the *Ara Pacis* knew, but outdid, the work on the Parthenon frieze. Loewy also says: "Nicht Porträtgruppe bloss, sondern Gruppenporträt, das erste, das wir besitzen, wohl das erste der Kunstgeschichte."

The Crista Transversa.—In *R. Arch.* xxvii, 1928, pp. 303–308, MARCEL DURRY publishes a note on the costume of the centurions of the Roman Empire *a propos* of a bronze statuette in the Museo delle Terme published by Lucia Morpurgo (*Memorie dei Lincei*, VI, II, 2, 1927, pp. 226 ff., pl. I, 4–6). He adds nothing to Miss Morpurgo's statements except in regard to the *crista transversa*. Those with an aigrette or *panache* he regards as not really *cristae transversae*. The real ones are of one piece of metal or of closely set hairs like a brush; they pass from one ear

to the other. The stele of Calidius and the statuette in the Museo delle Terme are examples of them. The *crista transversa* seems to have disappeared in the second century A.D.

The Problem of the Late Antique and the Arch of Constantine.—In *Sitzb. Preuss. Akad. Wiss.* (Berlin), xxix-xxxiv (1927), pp. 342–358 (4 figs.), Hans Lietzmann discusses the problem of the Late Antique, using as his text the Arch of Constantine in Rome (315 A.D.), for which much decorative material was taken from monuments of Hadrian and Marcus Aurelius. Only six reliefs, those above the three doorways, were especially designed for the new structure, the others being simply worked over. Four of these record the heroic deeds of the emperor, while the two over the main doorway represent him as addressing the people in the forum and distributing a largess. The author compares the treatment of these with similar scenes from the side-walls of the Rostra, executed in Trajan's time in the classical spirit of 200 years earlier. In the later work low relief replaces high, a picture effect being rather sought after, and color being used to supplement sculpture. Instead of the chisel the boring auger was much used. The distribution of figures in the field was more schematized and, above all, interest was concentrated upon the central figure, that of the emperor himself. He alone is represented in full front; the others are in face-profile, though their bodies are square to the front. The importance of the emperor and the nobles is shown by their greater size. Lietzmann insists that all this is not a mere decadence in artistic skill, but that it represents a difference in the object aimed at; that the laws governing demand and supply influenced the deterioration. The people were no longer interested in art or able to understand it. Individuality had yielded to mass and originality to type. He attributes the change to Oriental and barbarizing influences, and in the last half of his article discusses parallel movements in the fields of literature and religion throughout these same centuries.

The Ransom of Hector.—In *Jh. Oest. Arch. I.* xxiii, 2 (1926), pp. 62–70 (Nachtrag, p. 116), A. Schober compares the broken part of a sarcophagus relief found at Ostia in 1910, in which Achilles sits listening to a bending figure of which the outstretched right hand and one advanced foot appear, with four other known reliefs portraying the ransom of Hector. Schober concludes that the Ostia relief is a composite from the Paris relief as to the position of the suppliant, and from several other reliefs as to the grouping.

A Roman Portrait in Chicago.—In *The Art Bulletin* x (1927–28), pp. 258–262 (2 figs.), A. D. Fraser publishes a Roman female head in the Art Institute of Chicago. The coiffure is like that of the two Faustinas and, though it is not possible to identify the person represented, the head can be dated within a few years of 140 A.D.

PAINTING

Oscan Motif on Lower Italian Hydria.—In *Jh. Oest. Arch. I.* xxiii, 2 (1926), Beibl., col. 301–308, Margarete Lang identifies Oscan clothing and *motifs* on a hydria from lower Italy left to the National Museum in Budapest by Delhaes.

Studies in Pompeian Paintings.—In *Jh. Oest. Arch I.* xxiii, 2 (1926), pp. 71–115, the third article of W. Klein, who died in 1924, treats of the fourth style of Pompeian paintings. He identifies a number of paintings as fourth style and imperial date by the presence of *Erotes*.

COINS

Coins of Thurium.—E. S. G. Robinson publishes with accompanying facsimiles ten silver coins from the collection of the Marchese Ginori, remarkable for their rarity or other interest. Some variations from known dies appear in them, as

well as new points concerning the coin-engravers Histor and Molossus. (*Num. Chron.*, 1927, pp. 297–303; 1 pl.)

Reform of Coinage by Aurelian?—PERCY H. WEBB puts forth reasons for dissenting from H. Mattingly's belief (*cf. Num. Chron.*, 1927, p. 219) that Aurelian instituted a reform in the system of Roman coinage. He would instead attribute the change to Diocletian. He also believes that, as the denarius had the value of two quinarii, the antoninianus was rated at three quinarii. (*Num. Chron.*, 1927, pp. 304–306)

FRANCE

Celtic Swords.—In *Mannus* xx (1927), pp. 266–270 (3 figs.), O. RICHTER and M. JAHN write of certain very unusual Celtic swords with hilts decorated with spherical knobs. Only eight of these are known to exist; three were found in Eislingen, Ulm, and Bayern, in South Germany, four in eastern France in the Department of Côte d'Or, and finally an eighth specimen in western France near Nantes at the mouth of the Loire by the Vicomte de Lisle du Dreneuc. The authors think the original place of manufacture was in the Saone valley of eastern France. This sword has four of these knobs at the end of the hilt, arranged in two pairs in the plane of the blade of the sword and two more in the same plane where the blade joins the hilt. The sword seems to have been fashioned from one piece of metal. All seem to belong to the Hallstatt period.

The So-called Glazier's Furnace at Glozel.—In *R. Arch.* xxvii, 1928, pp. 293–302, MADELEINE MASSOUL discusses the so-called glazier's furnace at Glozel and shows that it is a pit for incineration, the date of which is much earlier than the Roman occupation.

GERMANY

German Fibulae of Roman Empire.—In *Mannus* xx (1928), pp. 79–117 (14 figs.), HELMUT PREIDEL treats of the *Absolute Chronology of the German Fibulae of the Early Roman Empire*. In a brief historical sketch he speaks first of Hildebrand's classification, which distinguished fibulae of the Bronze Age from the Hallstatt and La Tène forms, and then of the Dane Sophus Müller's further classification into an earlier and later Roman period. Hostmann and Tischler erred in thinking the fibulae of provincial Roman manufacture, and Montelius first vindicated their German source. To the dissertation of the Swede Oskar Almgren (Stockholm, 1897) we chiefly owe the scientific classification and chronological arrangement of the various forms of these brooches. The article lists 248 of them, arranged by place of discovery and indicating form and date as well as first publication.

HUNGARY

Budapest Antiquities.—In *Henszlmann-Lapok* (*Henszelmann-Blätter*, studies prepared in memory of Emerich Henszlmann, 1813–1888, first professor of the history of art in the Pazmany University, Budapest), 1927, A. HEKLER publishes short accounts of: I. A bust of a Greek philosopher. The soft expression of the face permits us to date it in the time of Marcus Aurelius and the hair confirms this impression. II. A bust of Philippus Arabs, a good representation of the Emperor. III. A fragment of a Greek portrait head in a private collection in Budapest which by its arrangement of the hair and general technique can be dated about 200 B.C.

BULGARIA

A Three-Headed Thracian-Anatolian Divinity.—A relief found in Bulgaria and first published in 1912 shows the Thracian horseman-god with three heads, one

full-face, the other two in profile. The triple character thus expressed to the eye may be compared with that indicated by such names as Trikasbos, a Lycian variant of Kakasbos, for the undoubtedly related horseman-divinity of Anatolia, whether the number implies a god of three worlds, heavenly, earthly, and underground, or is merely expressive of a threefold heightening of his power and majesty. (O. Weinreich, *Arch. Anz.*, 1927, pt. 1/2, cols. 20–23; fig.)

SPAIN

Scipio's Camps before Numantia.—In *R. Arch.* xxvii, 1928, pp. 5–17, Stéphane Gsell describes the seven camps and the wall of circumvallation built about Numantia by Scipio Aemilianus, the remains of which have been published and discussed in detail by Adolf Schulten (*Numantia, Die Ergebnisse der Ausgrabungen, 1905–1912.* Band III, *Die Lager des Scipio,* Munich, 1927, F. Bruckmann). The circuit wall was 9 kilometres long, agreeing with the 50 stadia of Appian. The camps were built, with one exception, on elevated and easily defensible ground and were laid out in accordance with the shape of the sites rather than according to the mathematical rules familiar to us from the camps of a later period.

GREAT BRITAIN

ESSEX.—'Romano-Celtic' Temple.—In *Ant.J.* viii, 3 (July 1928), pp. 300–326 (8 figs; map), R. E. M. Wheeler discusses a 'Romano-Celtic' temple near Harlow, Essex, various remains of which were excavated in the summer of 1927. The foundations show that the temple has a cella 18¾ ft. square, placed within a portico 48½ ft., inside measurements. The walls are slightly less than 3 ft. wide. The finding of painted wall-plaster leads to the suggestion that the walls had once been covered with plaster. It is suggested that the cella roof may have risen above that of the veranda and thus have received light from the upper windows, as was the case in the 'Temple of Janus' at Autun, although it is possible that the two parts, cella and veranda, were roofed evenly. A ditch surrounding the elevation upon which the temple foundations were found may be the remains of the normal device employed to mark out the sacred limits of the areas of such temples. Such evidence of chronology as was discovered would indicate that the temple was in use in the fourth and perhaps in the third century A.D., and was possibly constructed not before this time. There is evidence that the site of the temple was occupied to an extent by earlier structures which may be investigated. The finds consist of: a few coins belonging to the Roman Emperors from Claudius to Valentinian, and also British coins; brooches of iron and bronze; iron-ware in the form of nails, key, and knife; and fragments of pottery much of which can be designated pre-Flavian. The description of the Harlow excavations is made the occasion for a discussion of this type of temple in general. The structure was in the form of a square, or nearly square, cella enclosed by a veranda on all four sides. The floor of the cella in many instances was tesellated and the walls on the inside normally, and on the outside occasionally, plastered and painted. These temples frequently stood on hill-tops, and with them there was often associated a sacred pool or spring. Buildings other than the temple proper, and used in an accessory way, sometimes have been found within the sacred temenos formed in many instances by a ditch. The temples were dedicated either to purely native deities, or else were the centres of a composite worship consisting of Gallic and Roman or Germanic and Roman elements which had come to be designated by some name chosen from the classical religion. Mercury, Apollo, Mars are names that occur several times; others, such as Caprio and Latobius, seem to be free from classical influence. The votive objects consist

of many pipe-clay statuettes of Venus, Neolithic polished axes, sea-urchins, and silver vessels. There is slight evidence at any of the seventy-one recorded sites of these temples that would tend to show pre-Roman relics associated with the structural features. Furthermore, the coins discovered range chiefly from the first to the fourth century, many of them being of the second half of the fourth century. The general conclusion on the chronology, therefore, is that these temples were in use during the main portion of the Roman period and were then destroyed, possibly by the Franks, at the beginning of the fifth century. An interesting map accompanying this sketch shows the distribution of these temples, which are located in fairly concentrated areas; eight or nine in Britain, but all in the southern counties from Essex to Monmouthshire; a considerable number in the Gallic community about Rouen; another group in the land of the Aedui, in and about the Côte d'Or, the Auvergne, and the Lyonnais; about fourteen in the Rhine country a short distance south of Cologne; a few scattered examples in Switzerland, Holland, and Austria.

With reference to the origin of this type of temple, the conclusion is reached that it does not represent a pre-Roman architectural tradition but is an adaptation of Roman elements made by native Gallic architects shortly after the conquest of Gaul in a process by which Roman ideas about the gods were also carried over into the native cults. Just exactly from what centre of diffusion these temples spread, whether from Rouen or the Eifel, for example, cannot be safely said. Diffusions of such influence can have been readily facilitated by the annual meeting of delegates from Gallia Comata at the altar of Roma and Augustus at Lyons.

The Inscriptions of the Clyde.—In *R. Arch.* xxvii, 1928, pp. 320–324 (4 figs.), F. W. G. FOAT recapitulates for French readers the controversy which was carried on between 1895 and 1905 relative to Neolithic inscribed objects found in Scotland near the Clyde, objects which show similarity to others found at Alvao in Portugal. The parallel between the incredulity shown at that time in regard to the objects found in Scotland and that exhibited towards the recent discoveries at Glozel is obvious.

SHROPSHIRE.—Bronze Hoard.—In *Ant. J.* viii, 1 (Jan. 1928), pp. 30–47 (2 pls.; 3 figs.), LILY F. CHITTY discusses a Late Bronze Age hoard discovered at Little Wenlock, Shropshire. The discovery dates as far back as 1834. Various more or less conflicting previous accounts of the hoard are now examined, and the conclusion is reached that 18 implements and fragments can be identified: a celt, a broken sword, 16 spear-heads and remnants. The spear-heads resemble one another in type, size, and general condition, though apparently no two were made from the same mould. The instruments are badly battered and were apparently gathered together as scrap.

Swanwick Refuse Pit.—In *Ant. J.* viii, 3 (July 1928), pp. 331–336 (4 figs.), CHARLES F. FOX discusses the finding of about twenty burnt clay loom weights of the Bronze Age and a portion of a tool-dressed saddle quern in a refuse pit sunk in the clay at Swanwick, Hants.

EARLY CHRISTIAN, BYZANTINE, AND MEDIAEVAL

City-Gate Sarcophagi.—In *The Art Bulletin* x (1927–28), pp. 1–45 (50 figs.), M. LAWRENCE makes a careful study of the type of columnar sarcophagi the architectural decoration of which shows the motive of the gate of a city, and she analyzes the relations between these sarcophagi and other types. They form a closely connected group, the purest examples being assignable to one atelier. Like other columnar sarcophagi, they reflect the Asiatic tradition and have subjects and

ornament foreign to the frieze sarcophagi of the West. Their high cubical shape, decoration on all sides, and architectural background are derived from the pagan sarcophagi of Asia Minor, whence sprang the atelier of which they and probably other columnar sarcophagi were the product.

Restoration and Fabrication of Early Christian Sculpture.—In *The Art Bulletin* ix (1926–27), pp. 88–141 (33 figs.), J. Wilpert demonstrates how much circumspection is necessary in dealing with Early Christian sculpture, because of the dangerous and ubiquitous activities of restorers and forgers. In his preparation of a corpus of Early Christian sarcophagi he has come upon abundant absurdities, such as "the head of Napoleon III added to the figures of a sarcophagus in the Louvre, the head of Pius VI on one in the Lateran, and the Garibaldi on a sarcophagus in Leyden." Forgery with intent to cheat is less common (though known) with sarcophagi than with smaller objects, among which Wilpert discusses with devastating results the "cup of Constantine," "chalice of Antioch," "second silver treasure from Cyprus," and other recently invented treasures.

EGYPT

The Siren Woman-Fish.—In *R. Arch.* xxvii, 1928, pp. 18–25 (6 figs.), W. Deonna writes of the siren in the form of a woman with two fish tails, a form which appears in Christian art about the twelfth century and is mentioned about the sixth century in the *De Monstris*, after which it appears in the mediaeval Bestiaries. These literary notices point to Egypt, and it is undoubtedly in Egypt that the source of this form, which is unknown in classical art, arose.

The Style of the Consular Diptychs.—In *The Art Bulletin* x (1927–28), pp. 60–101 (34 figs.), E. Capps discusses the consular diptychs from the standpoint of style and finds that they fall into two major and one minor groups. There is first a Latin group made to order for the various consuls of the fifth century. Next there is a larger sixth-century group made in Egypt or under Alexandrian influence and turned out wholesale to meet the demands of the consuls, who after they had bought them had the necessary consular inscriptions added. Finally there are a small number of these diptychs which appear to be Latin copies of Alexandrian models: three Magnus diptychs, based on the Alexandrian diptych of which a fragment is preserved in the Bibliothèque Nationale; a Philoxenus diptych in Liverpool, which is a copy of uncertain date of one in the Trivulzio collection; and an Orestes diptych at South Kensington, imitated from such a model as the Clementinus diptych at Liverpool.

A Vatican Pyxis and a Sancta Sanctorum Plaque.—In *The Art Bulletin* ix (1926–27), pp. 331–340 (11 figs.), E. Capps attributes to Egypt a plaque from the Sancta Sanctorum and a pyxis from Milan Cathedral in the Museo Cristiano of the Vatican Library. He dates them about 500 and 517 A.D. respectively.

ITALY

Sienese and Pisan Trecento Sculptors.—In *The Art Bulletin* 1926–27, pp. 176–221 (55 figs.), W. R. Valentiner publishes a series of studies of Trecento sculptors. Nicola di Nuto is defined in his relations to Giovanni Pisano, Ramo di Paganello, and Lorenzo Maitani, and considerable additions are made to his *œuvre*. Next the work of the partners Agostino di Giovanni and Agnolo di Ventura is assembled along with that of the former's mediocre son Giovanni. The two great Pisan architects and sculptors, Tino di Camiano and Lupo di Francisco, are considered with special reference to the tomb monuments of Emperor Henry VII and of the Gherardesca family, respectively attributable to them. The personality of Giovanni Balducci is also clarified by a variety of new attributions, taking as their

point of departure the signed tomb of Guarnerio Castruccio at Sarzana, from which the Madonna is in the Johnson collection at Philadelphia.

FRANCE

The Franks and Armorican Brittany.—In *R. Arch.* xxvii, 1928, pp. 246–253, SALOMON REINACH writes of the history of Brittany in the fifth century and later. The country was partially depopulated and was harried by Saxon pirates, but received immigrants from Great Britain. The cities were governed by the bishops and contained remnants (and descendants) of Roman armies. The Franks never conquered Brittany until the time of Pepin the Short. This is proved by the absence of Merovingian monuments of any kind in Brittany.

GERMANY

Jean Fouquet.—In *Zeit. f. Bild. K.* lxi (1927), pp. 345–349 (4 figs.), F. WINKLER discusses the illuminations of Fouquet that still remain in Germany since the miniatures of the Book of Hours of Étienne Chevalier have passed from Frankfurt to Chantilly. Germany still boasts the famous *Boccaccio* with the Fouquet illustrations. To these must be added the three hitherto unnoticed miniatures in the Library of Duke August, at Wolfenbüttel, illustrating a book by the so-called terror of England, Jean de Bueil. After comparing these three pages with the Boccaccio illustrations and the miniatures in Chantilly, there are no grounds for the belief that these are the work of a clever imitator.

HUNGARY

A Reliquary Adorned with the Arms of Hungary in Bari.—In *Henszlmann-Lapok*, 1927, Dr. J. BALOGH stresses the testimonial of the inventory of the Basilica of St. Nicholas in Bari, made in 1362, as a source for our knowledge of the liberality of the Hungarian kings. This basilica received many gifts from the house of Anjou, but they are all lost except the reliquary which is illustrated in this paper. It agrees with the account in the inventory except for the absence of the arms of Petrus de Morerijs, Prior of St. Nicholas. The author promises later to consider in greater detail the identity of the donor and the artistic relations of the reliquary.

RUSSIA

The Miniature in Russian Art of the pre-Tartar period.—In *Slavia* (Prague), vi, pp. 742–757, VYACHESLAV SHCHEPKIN points out that those miniatures which come from the pre-Tartar period in Russia are relatively few in number and are connected with princes rather than with monasteries. They seem, furthermore, to reflect the monumental style of the Macedonian dynasty of Constantinople rather than the later style of the Komnenas period. In some of these there seems to be an attempt to represent in the coloration the softness of the Ukrainian landscape, since the colors are far softer than in those miniatures which can be associated with Novgorod. The author discusses also the Psalter of Gertrude, made for the Archbishop of Trier Egbert, 977–993, but apparently decorated later, in the eleventh century. Some of these miniatures have been thought to show Western influence, but the author concludes that they were made by a Russian during one of the westward journies of Svyatopolk, whose daughter was married to the King of Poland.

SPAIN

The Early Panels of Catalonia.—In *The Art Bulletin* x (1927–28), pp. 153–204 (77 figs.), W. W. S. COOK continues the publication of his studies on early painting

in Catalonia with an exhaustive study of the iconography of the Old and New Testament Panel from Sagars. The article treats monographically the following themes: The Fall of Man, The Entry into Jerusalem, The Betrayal of Christ, and The Descent from the Cross.

Gothic Painted Ceilings from Teruel.—In *The Art Bulletin* ix (1926–27), pp. 341–351 (17 figs.), M. S. Byne calls attention to the wealth of Gothic ceiling painting at Teruel. Although the finest example, that still *in situ* but hidden behind a later vault in the cathedral, remains, others have been removed. That from "the Jew's house" has been exported by a Madrid dealer. Three ceilings have come to America and are now owned by Myron C. Taylor, New York; George E. Steedman, Santa Barbara; and William Randolph Hearst.

A Romanesque Fresco in the Plandiura Collection at Barcelona.—In *The Art Bulletin* x (1927–28), pp. 266–273 (10 figs.), W. W. S. Cook publishes the three fragments of a Catalan fresco from the parish church of Argolell in the Plandiura collection. They represent the Madonna and various saints and belong in style with the frescoes from the Cardós valley. Although still in the Romanesque tradition, the Argolell fragments are to be dated in the thirteenth century. Another late Romanesque fresco in Sr. Plandiura's collection is a fragment with a standing Apostle, which is all that is left of the decorations of the chapel at Esterri d'Aneu.

NORTHERN AFRICA

Three Christian Objects in the Museum of the Bardo.—In *R. Arch.* xxvii, 1928, pp. 67–89 (4 figs.), Louis Poinssot and Raymond Lantier discuss a censer and a beaker from Furnos Majus and a eucharistic mould from Djebeniana, all of which are in the Museum of the Bardo at Tunis. The censer is a footless bowl of very thin metal of a golden yellow color. It has three rings for suspension. Round the upper part runs an inscription in letters of the sixth century A.D., *κατειθυνθίτο εἰ προσευχί μου ὡς θυμίαμα ἐνόπιόν σου κ(ύρι)ε.* The use of ι and ει for η and of ο for ω is common enough at this time. The main decoration consists of an acanthus scroll so arranged as to form eight medallions, in which are birds. It is carefully executed and is purely classic in its inspiration. Its origin is to be sought in Egypt. The beaker is also of golden yellow bronze. The receptacle is wide, but thin, and stands upon a truncated conical base. The handle is wanting. It belongs to the class of sacred vessels called *ama*, and is to be dated in the sixth century. The mould is of terracotta, about 0.16 m. in diameter. It was used for moulding eucharistic bread. In the centre are a stag, a tree, and two plants. Round the centre runs the inscription *Ego sum panis vivvs qvi de celo descendi*, preceded by a cross with four equal arms. The letters are those of the sixth century. The stag probably symbolizes Christ, and the tree the tree of life. Discussion of the forms of tree and stag leads to Egypt. So in the three objects here discussed the influence of Egyptian Christianity is evident.

RENAISSANCE

A Detroit Collection of Paintings.—In *Art in America* xvi (1928), pp. 49–58 (6 figs.), W. Heil discusses the fourteen pictures composing the uniformly fine collection of Edgar B. Whitcomb in Detroit. A portrait by Tintoretto and one of those delightful *vedute* by Francesco Guardi represent the Italians. Two works by Rubens and Van Dyck convey an idea of the opulence of Flemish art of the seventeenth century, while a fine portrait of Titus by Rembrandt and three landscapes by Ruisdael, Hobbema, and Cuyp represent the Dutch. From the French school are a Holy Family by Poussin, a super-refined Minerva by Fragonard, and a por-

trait of Marie Antoinette by Mme. Le Brun. Excellent paintings of the English school of the eighteenth century, by Gainsborough, Beechy, and Hoppner, complete the collection.

The Stemma of Terence Manuscripts.—In *The Art Bulletin* x (1927–28), pp. 102–120 (21 figs.), L. W. JONES studies the relations of the illustrated Terence manuscripts on the basis of their iconography. He finds, besides new evidence for datings, that *Ambrosianus* H 75 inf. is the closest of existing manuscripts to the original miniatured archetype and that *Turoni* Lat. 924 and *Leidensis Vossianus* 38 reflect a second wave of influence from the delta line of manuscripts.

ITALY

Antonio Vivarini.—In *Art in America* xvi (1927), pp. 12–15 (fig.), F. MASON PERKINS attributes to Antonio Vivarini a Madonna and Child in the collection of Mr. Percy Straus, New York, which has until recently been called the work of an anonymous Venetian painter of the fifteenth century. It is a product of Vivarini's ripest period and is interesting not only from the point of view of iconography, technique, and style, but also for its purely decorative qualities.

The Art of Scenography.—In *The Art Bulletin* x (1927–28), pp. 231–257 (11 figs.), C. RICCI writes a descriptive account of the evolution of stages, stage settings, and methods of stage lighting from Classical antiquity to modern times. He gives special attention to the great period of Italian scenography extending from the Renaissance to the eighteenth century and brings into their proper place and prominence several neglected artists of those times.

Bartolommeo Veneto.—In *Zeit. f. Bild. K.* lxi (1927), pp. 280–288 (9 figs.), E. MICHALSKI discusses Bartolommeo Veneto, called the Venetian Proteus, who was at first a dilettante but later abandoned his traditions, and combined the significant innovations of the time in a striking, but second-rate, personality. His early work shows the influence of the Bellini school in some of his figures and of Mantegna in others, while Giorgionesque influence is apparent in his use of color. He combines portraiture, mythology, and allegory in his repertory. To him may be attributed the Resurrection in Berlin from the Bergamo Museum; it has been attributed to Bellini, but has the earmarks of Bartolommeo. In his later works there is a definite liberation from conventions, but though he is gifted in the use of ornament and landscape, and in the facility with which he imitates, he lacks the inner flame and inventiveness of a first-rate artist.

Francesco di Giorgio.—In *Art in America* xii (1928), pp. 67–71 (2 figs.), F. MASON PERKINS discusses three paintings by Francesco di Giorgio. A Virgin and Child with Sts. Jerome and Bernardino and two angels, the property of Mr. and Mrs. Edward Holmes of Boston, displays in accentuated manner some of the most prominent formal peculiarities of the master's style. Two panels, evidently companion pieces, in private possession in New York, are interesting examples of Francesco's elastic and personal style in treating secular subjects.

Genoa and the Netherlands.—In *Zeit. f. Bild. K.* lxi (1927), pp. 273–279 (8 figs.), M. J. FRIEDLANDER throws light on the artistic relationship between Genoa and the Netherlands. A triptych by Van Eyck came into the possession of the King of Naples in the middle of the sixteenth century through a resident of Genoa. Roger van der Weyden, Gerard David, and Joos van Cleve are all represented in Genoan churches and museums. Traveling Italians brought Flemish work back with them, and Flemish artists traveling through Italy took commissions. They seem to have been especially well received in Genoa. In the Palazzo Bianco in Genoa there are four uniformly sized panels, marked Albert Bouts, which do not seem to have anything in common with his work as represented in the Poldi-

Pezzoli Museum, in Milan. In the Palazzo Reale in Genoa there is Flemish work illustrating legends of St. Catherine and St. Agnes. Genoa seems to have been more under the influence of Antwerp than of Bruges.

Luciano Laurana and the "High Renaissance".—In *The Art Bulletin* x (1927–28), pp. 125–152 (31 figs.), F. Kimball establishes the attribution to Luciano Laurana of an architectural perspective panel in the Walters Collection at Baltimore, and another in the Ducal Palace at Urbino. Proceeding from these he shows the place of Luciano in the history of architecture. Inspired by Alberti, Luciano became one of the founders of the "High Renaissance," which is the style of a school rather than of a period. In creative originality and influence his importance was comparable to Bramante's.

The Portrait of Raphael in the Louvre.—In *Zeit. f. Bild. K.* lxi (1927), pp. 357–358 (2 figs.), M. Friedberg opposes the attribution of the portrait of the young man in the Louvre to Raphael, contrasting it with a drawing of a young man by Raphael at Oxford. His theory is that it is a portrait of Raphael by some unknown artist who has used as model the Raphael self-portrait in the Uffizi. He supports this theory by quotations from Burch, Mariette, and others.

Reconstruction of an Altarpiece.—In *Art in America* xvi (1927), pp. 16–25 (6 figs.), G. Gronau succeeds in reuniting five separate predella panels and in connecting them with the main panel of an altarpiece by Ghirlandaio in the Uffizi depicting the Madonna between two archangels. A charming little panel in the Detroit Institute, attributed to the shop of Ghirlandaio and representing the battle between the archangels and devils, was first linked with the Uffizi altarpiece. A panel in the National Gallery, erroneously marked David Receiving the Shew Bread from the High Priest, having the stylistic qualities of the Detroit piece, became St. Justus Distributing Bread to the Soldiers (the two bishops in the Uffizi altarpiece are St. Zenobius and St. Justus). Later three panels at the Metropolitan Museum (where they are ascribed to Botticini) were added to the series. These depict the Marriage of the Virgin, a Miracle of St. Zenobius, and Tobias and the Archangel. This reconstruction of a masterpiece seems well founded.

The Sarcophagus of San Lorenzo.—In *The Art Bulletin* x (1927–28), pp. 46–59 (17 figs.), F. H. Taylor discusses the class of Attic sarcophagi to which the sarcophagus in the porch of S. Lorenzo f. l. m. belongs, and he shows that this example must in its original aspect have been made in the second century of our era. The decoration consisting of vintaging putti, however, proves to be a later addition, to make room for which the original strigilation and some of the moldings were cut away. Analogies for the putti and other features of the vintage are to be found in Renaissance rather than Early Christian art. Works of the school of Filarete offer a variety of parallels for them and for some of the moldings that were carved on the sarcophagus at its reworking. We have thus an antique sarcophagus with Renaissance reliefs, not an Early Christian work at all.

Some Florentine Paintings in Russia.—In *Art in America* xvi (1927), pp. 25–40 (11 figs.), V. Lasareff discusses some Florentine trecento paintings at the Hermitage, Leningrad, and at the Museum of Fine Arts in Moscow. The earliest is a well-preserved tondo at the Hermitage, representing the Salvator Mundi. This resembles in many ways a Christ in two Paduan frescoes and a standing figure of Christ in the chapel of St. Nicholas in the Lower Church at Assisi, both attributed to the school of Giotto. The tondo is placed in the second decade of the fourteenth century; the nearest work in date is a fragment representing St. James Major which is attributed to Niccolo di Tommaso, likewise in the Hermitage. At the Moscow Museum is a Madonna with angels, which is connected with the school of Orcagna, being attributed to Giovanni Cristiani. Two fragments at

the Hermitage are ascribed to Spinello Aretino, by comparison with his Monte Olive to altarpiece. The school of Lorenzo di Niccolo Gerini (1400) is represented by two Madonnas at the Hermitage, one of which is said to be an outstanding work of the late trecento and probably the most successful work of Lorenzo di Niccolo.

A Venetian Painting in Detroit.—In *The Art Bulletin* ix (1926–27), pp. 70–75 (fig.), F. J. MATHER shows that the inscriptions on the back of the three-figure Venetian painting in the Detroit Institute are unconvincing as contemporary evidence of authorship and that the picture could have been derived from early sixteenth-century works at a later date. In *Art in America* xvi (1927), pp. 40–44, W. R. VALENTINER maintains his former attribution of the painting to Giorgione, Sebastiano del Piombo, and Titian. He holds that the inscriptions, although not contemporary, represent an old Venetian tradition, and that the picture has been too widely accepted by scholars to be later than its apparent style indicates.

GERMANY

Exhibition of German Art.—In *Revue de l'art ancien et moderne* lii (1927), pp. 65–78 (16 figs.), R. BONYER discusses the exhibition at the Musée du Jeu de Paume of works of art of the end of the fifteenth and beginning of the sixteenth centuries, the time of that remarkable personality Maximilian I. The exhibition included works lent by the Austrian republic and by museums and libraries of France; there were portraits of the imperial family, tapestries, books, armor, wood engravings, especially those of the celebrated "Triumph" designed by Dürer, the history of which is here related. Maximilian in art means Dürer, for he was decidedly the most unique and outstanding figure in the emperor's reign. In the "Triumph" fantasy and reality blend. Kölderer, an architect and painter, made 110 miniatures, 95 of which remain in the Albertina. Then Dürer began his work in wood. Ten years passed before 138 pieces in wood completed the long series of scenes from the life of Maximilian, and by that time Maximilian was no longer alive.

HUNGARY

The Abbot of Madocsa, the Miniaturist of the Royal Books.—In *Henszlmann-Lapok*, 1927, Dr. J. BALOGH endeavors to explain the meaning of this title, which is found in the accounts of Wladyslaus II in 1495. He shows that the name of this man was Fra Zoan Antonio Cattaneo, a Dominican from Milan, who worked with other miniaturists for King Matthias Corvinus in his miniature studio in Ofen at the end of the fifteenth century. He was the fourth member of the group of which the others were Bandini, Felix Ragusanus, and Francesco Roselli. We can assign to him such manuscripts as the Parisian Cassianus, which show north Italian influence.

Andrea Scolari, Bishop of Várad as Maecenas.—In *Archaeologiai Értesitö*, new series, xl (1923–1926), pp. 173–188, JOLAN BALOGH writes that at the beginning of the fifteenth century Andrea Scolari, a member of the same Florentine family as Filippo Scolari, was Bishop of Zagreb and later of Várad. At his death in 1426 he left his property to Filippo, on provision that he would found a cloister. During his life he had done much in building and establishing monasteries, etc. All of his foundations have been destroyed, but to this family belongs a great part in the strengthening of the Italian influence in this area in the fifteenth century.

Calvary Rotunda in Budapest.—In *Henszlmann-Lapok*, 1927, BRUNO GRIMSCHITZ, discusses the Calvary rotunda in the Epreskert, Budapest. This has been studied by the Institute for the History of Art, and especially by J. Kapossy and Ivan Obilics. The City Archives of Budapest, in 1732, refer to the monument as the memorial of Frau Anna Maria Visztner (Viznerin), alias Schwartz (Schwarc-

zin), who died in 1717. She is recorded to have built a mortuary chapel in 1711. This reference seems to mean the subject under discussion. The work turns into complete architectural form the mediaeval *mons calvariae*, where an arcade and steps completely surround the inner cylindrical walls 6.25 m. in diameter. The motifs and style coincide closely with the work of Johann Lucas von Hildebrandt, who did considerable work between 1716 and 1720, and the mortuary can be connected with his work.

The Origin of the Grassalkovich Monument in Besnyo.—In *Henszlmann-Lapok*, 1927, J. Kapossy discusses the date of the monument of Count Anton Grassalkovich, and shows that this is mentioned in an entry in the Annals of the Capuchin Monastery of Mariabesnyo and was, according to this, erected towards the end of 1772. The monument is the work of Johann Georg Dorfmeister, a prominent, if not extremely important, sculptor of the Viennese school of the period.

The same author publishes also a color sketch by Ignaz Unterberger, which was procured in Munich in 1926. The sketch seems to be a study for the altarpiece in Cavalese La Madonna che offre il Bambino a Sant' Antonio. Unterberger went to Vienna in 1776 and became a member of the Viennese Academy and a much sought-after painter of Late Baroque Church work.

RUMANIA

Slavonic Parallels of Paris MS. Gr. 74.—In *The Art Bulletin* ix (1926–27), pp. 222–274 (62 figs.), S. Der Nersessian publishes two Slavonic Gospels of the monastery of Sucevitza, Moldavia, that were shown in the exhibition of Rumanian art at Paris in 1925. One is of the late sixteenth, the other of the early seventeenth century. Both belong, like Curzon 153 of the British Museum and the Elizavetgrad Gospel, to the group of Paris Gr. 74, an eleventh-century Byzantine manuscript. For it is the—presumably Syrian—tradition of this manuscript rather than the Constantinopolitan tradition exemplified by Laur. VI, 23, which seems to have been accepted by the Balkan Slavs, part of whose Christianity was derived from the East directly and not via Constantinople.

THE NETHERLANDS

A Former Attribution to Ouwater.—In *Art in America* xvi (1928), pp. 72–77 (fig.), P. Ackerman challenges the attribution of the Resurrection of Lazarus in the Kaiser Friedrich Museum to Albert Ouwater. It is not essentially Dutch in style, nor is there any kinship with the work of Geertgen, Ouwater's pupil. Besides, on one of the cloaks *Mirin* is neatly and clearly printed in gold. On one of the hats of the spectators another inscription reads *Nai*. This is *Jan* backwards. Various versions of this name appear in the documents of the Northern guilds of the time. In view of this inscription and the intrinsic evidence in the painting, there seem to be no justifiable grounds for continuing to regard the painting as the work of Ouwater.

BELGIUM

Self-Portrait by Rubens.—In *Art in America* xvi (1927), pp. 3–11 (4 figs.), F. E. W. Freund writes of a hitherto unknown self-portrait of Rubens which has recently been acquired by Mr. William R. Timken of New York. A chain is established connecting this portrait with the portrait of Rubens and Van Dyck by Van Dyck in the Schlicting collection at the Louvre and an engraving of Rubens and Van Dyck by Paulus Pontius. The self-portrait seems to have been used as a model for the Van Dyck Rubens, and when the engraving is stripped of the usual embellishments given to popular idols, we have Van Dyck's portrait.

SPAIN

Pictures by Zurburan.—In *Zeit. f. Bild. K.* lxi (1927), pp. 289–292 (5 figs.), A. L. MAYER discusses some hitherto unknown works by Zurburan. Two panels of St. Jerome and St. Benedict, formerly in the collection of Lord Heylisbury and now in the Boehler collection in Munich, must have belonged to a series executed about 1630. In private possession in Madrid there is a Monk dated about 1630 also, which is undoubtedly by this artist. Zurburan may safely be accredited also with the powerfully executed picture of a Dominican friar in a private collection in Barcelona, where it is now marked anonymous. Two characteristic Kneeling Angels, as well as a beautifully conceived Liberation of Peter, in the collection of Molina Dazas in Madrid, may be added to the list. Another characteristic work, though not of the finest, is the St. Agnes in the possession of José Suarez in Seville. Other works here attributed to the master are a Child's Portrait, in the possession of Dr. Carvollo, a Crucifixion, in Sonora, indicating the influence of Ribera, and a St. Dorothy, in Seville.

NEWS ITEMS FROM ATHENS

The reports from the excavations of the French School during 1927 were not available until this summer. They were, for the most part, continuations of previous campaigns on the same sites, but in addition M. Bon carried out an exhaustive survey of the Frankish remains in the Peloponnesos, and in September he explored the mountainous region to the north of the Alpheus, identifying the ruins in Paleokastro of Galatas as the castle of Akova, the seat of the first barony of the principality of Achaia. The fortress was larger than Karytaina, corresponding to Kalavryta in type, situated on a rocky eminence between two confluent valleys. The outer circuit of walls was very extensive and was defended on the north where the slope was more gradual, by three heavy square towers. There are traces of other walls within this circuit, and on the summit of the hill there is a large square donjon.

The French excavations at Thasos in 1927 centred within the sanctuary where the two large altars, one circular and one square, had been found in 1925. This sanctuary is rectangular in form and runs approximately north and south. It was built on sloping ground which made it necessary to have a very strong supporting wall along the west face of the peribolos while the east face is cut into the rock of the hillside, and this part of the enclosed area was never levelled and could not have been built upon.[1] The western supporting wall served as the façade of the sanctuary and shows five courses of marble blocks still in position. The great doorway was not in the centre of this façade but nearly ten metres nearer the northern corner. The approach to this entrance must have been by a ramp of packed earth. The marble sill is still in place, a monolith 6.30 m. in length and shows traces of a square central dividing pillar. Five metres south of this gateway there was, at the same height in the wall, a window, 0.90 m. wide with a base below it which would point to the setting of a statue in this recess. The peribolos showed drainage openings through the outer walls. Within the enclosure the altars found in 1925 appear to have been the important elements while foundation walls along the south face of the sanctuary and in the northwest angle would seem to have served as dwellings for the priests. The attribution of this sanctuary to Poseidon is fixed by the finding of two inscriptions which bear the same dedication: "Xenophanes son of Myllos to Poseidon" and by a fragment of a decree of an association

[1] The peribolos measures: on the west face 48.50 m.; on the east 52.50 m.; on the north 29 m.; on the south 32.50 m.

of Poseidoniasts and a small lead anchor of the characteristic ex-voto style. Directly in front of the sanctuary was an altar built of marble which apparently carried the plaque with a short sacred law forbidding the sacrifice of goats to Hera Epilimenia. To the south of the great entrance and against the wall of the peribolos there was found a marble statue of Aphrodite riding a dolphin with Eros perched on its tail.

In Samothrace M. Chapouthier of the French School cleared a building to the north of the sanctuary. This exists in foundations only, but these are of the same poros used in the foundations of all the great Ptolemaic buildings and the structure must therefore be dated about the middle of the third century B.C. In plan it shows a three-stepped crepidoma with inner divisions. Fragments of marble from it were found built into modern walls and further exploration will undoubtedly establish this as one of the important temples of Samothrace.

At Mallia in Crete members of the French School spent two months clearing the north and east fronts of the palace. The limits of the building and its entrances on the east and northeast have been definitely established. The eastern walls, composed of great blocks of blue limestone, were *c.* 1 m. thick. At the height of the central court this wall was interrupted by a large opening flanked by two round columns. Farther to the north there is a jut in the wall, pierced, perhaps, by a window. In the eastern wing there are two regions of storerooms opening on the colonnade of the central court; the first includes six rooms for storage, reached from a NS. corridor with a narrow side passage; the second was divided into three rooms. To the north the rooms were grouped around a small court with a portico on two sides. The western part of this group is composed of rooms at a slightly lower level reached by steps in each narrow doorway. One room showed a low bench around the walls and on it were found numerous cups and jars; another room contained an immense pithos sunk in the ground. Between this quarter and the portico was situated the northern entrance to the palace, a real propylon composed of two successive vestibules at right angles to each other, paved with blue limestone very carefully worked. The sill of the outer doorway was of this same material. In front of the door there was a courtyard paved with short irregular slabs and from this emerged a roadway (1.15 m. wide) which descended obliquely in the direction of the Port. The arrangement here is identical with that of the SW. propylaia of Knossos. This would appear to be the official entrance as it leads through a small court to the north portico of the central court near the "Hypostyle Hall," while the east entrance gave access more directly to the magazines. The new discoveries have confirmed the former views as to the date of the palace. There are distinct traces of two occupations; the latest, found especially in the region around the northern court, shows typical M. M. IIIb remains, whereas the rest of the construction must be contemporary with M. M. I.

Mr. Rhomaios very kindly let us have a brief report on the Helleno-Danish excavations at Calydon which were resumed in 1928 in the same region where digging was carried on in 1926, *i.e.*, in the Sanctuary of Artemis Laphria and the Heroön. In the Sanctuary it was ascertained this year that a second smaller temple, also archaic, existed alongside the large temple.[1] This second smaller temple must have belonged to Apollo Laphrios who is mentioned only by Strabo. This attribution is made certain by an archaic boundary inscription: Ἀπόλονος Λαφρίο while an intact bronze inscription of *c.* 300 B.C. supports the view that to the goddess must be attributed the chief worship and consequently the larger temple. Figurines of terracotta were collected in large numbers. These are of various periods,

[1] From its foundations the temple appears to have been 15.45 m. long by 10.50 m. wide.

although the archaic predominates. To the forty fragments of metopes discovered in the excavations of 1926, eighty new pieces were added. From some of them may be put together a curious Gorgoneion with snakes issuing from the cheeks and ascending to the hair above the eyes. An important find is a terracotta head, life size, representing a goddess, undoubtedly Artemis. It is of the severe style of *c.* 470 B.C. Of slightly later date and smaller size is a head of Dionysos preserving its color. Important also are the new finds among the architectural terracottas; especially noteworthy is the sima of a gable of *c.* 350 B.C. with beautiful painted representations of Victories in chariots. The excavations of the Laphriaion cannot yet be considered finished. In the Heroön work was carried out on a smaller scale and the results show that the building above the vaulted tomb appears to be much more important than was supposed in 1926. To the east of this building the end of a great colonnade was uncovered showing a peculiar variety of Ionic capitals.

A third campaign at the Argive Heraeum was conducted by Mr. Blegen from April 18 to June 8, 1928, with funds generously provided by Mrs. Joseph Clark Hoppin. The campaign resulted in the discovery of two burials, apparently of the Neolithic Period, nineteen Middle Helladic graves, and twenty-one Mycenaean chamber-tombs. The Neolithic burials, the earliest interments yet found at the Heraeum, were very simple: the bones lay heaped together, packed in with small stones, in shallow depressions of no great size cut in native rock. Some of the bones had clearly been burned, and above the graves was a layer of black earth and carbonized matter, certainly the result of fire. Almost no objects were recovered in these graves, but the earth covering them contained a good many potsherds of exclusively "Neolithic" types. Twelve of the Middle Helladic graves were discovered in a group close together, forming a small cemetery on the upper slope of the East Yerogalaro ridge. They were all cist-graves, generally small rectangular pits hewn in hard pan, frequently, but not always, covered with large slabs of limestone. They yielded a good many vases, chiefly diminutive pots decorated with dull paint, a few small bronze implements, and some simple jewelry of paste, crystal and bronze. The Mycenaean tombs, of the same type as those excavated in the preceding campaigns, proved unusually rich in pottery, jewelry and bronze weapons. The total number of vases recovered is not far short of four hundred. The two most important objects unearthed were a gold ring with a large bezel bearing an engraved scene of two heraldically confronted griffins, standing one on either side of a spirally fluted column; and a small ivory statuette of a standing "goddess." The latter wears a characteristic Minoan costume, with a flounced skirt, decorated with foliate sprays and rosettes, a low-cut bodice, open about the full breasts, and an elegant necklace about the throat. The figure was unfortunately badly shattered.[1] The right arm is missing, but the remains of the fingers show that the hand was laid over the right breast. The left arm was bent at the elbow and held across the body. This statuette is the second of its kind to come to light on the mainland of Greece, the only other example yet known being the one found by Tsountas at Mycenae.

The University of Cincinnati which had financed the three campaigns at Nemea (1924–27) began an exploration of the territory farther south in the Peloponnesos with a careful excavation of a low mound at Hagiorgitika not far to the east of Tripolis in Arcadia. The campaign took about three weeks and was conducted by Mr. Blegen. The deposit covering the mound had a maximum depth of three metres and proved to be the gradual accumulation of debris from prehistoric settle-

[1] It has now been skilfully repaired by M. Gillièron of the National Museum, Athens.

ments. The remains of simple dwellings came to light; these houses had stone foundations (the superstructure was of more perishable material), their floors were of packed clay and there were fixed hearths, either circular or rectangular. Vast quantities of potsherds were found illustrating clearly two chronological stages in the occupation of the mound. The characteristic pottery from the deeper strata is decorated in red on a white or buff ground and corresponds with the painted ware of the first Neolithic Period in Thessaly. The second style apparently represents a regular development from the earlier one, but the colors change to brown and black on a buff ground. No examples of "Dimini" ware came to light. No trace of metals was discovered, but the excavations yielded numerous implements of stone: celts, pounders, slingshots, etc., and a considerable quantity of pins, needles, chisels and other instruments of bone. There were also numerous objects of terracotta including several fragmentary figurines. An astonishing quantity of animal bones was found in the mound, many of them well preserved, in fact almost petrified. One small grave also came to light which contained in a small space the closely packed bones of an adult skeleton. All these remains seem to belong to a pure Neolithic phase of civilization. At a few points here and there about the hill traces of later occupation appeared, chiefly in the form of several Early Helladic *bothroi* cut through the earlier deposit and filled with fragments of Early Helladic pottery.

E. P. B.

BOOK REVIEWS

STUDIES ON PREHISTORIC CYPRUS, by *Einar Gjerstad*, pp. 342. (Uppsala Universitets Arsskrift 1926). A–B Lundequistska Bokhandeln, Uppsala. 12 kroner.

Cyprus has not been well treated by archaeologists. When the island's great richness in ancient remains was first discovered it was exploited by excavators who dug for plunder to ornament museums rather than for information to illuminate ancient history and to throw light on the relations of the island with the neighboring countries. This is specially true of the vases and other antiquities of the prehistoric period which in the absence of written history are the only clues to the history of the island in the Bronze Age. Even the British Museum excavations at Enkomi "the Mycenae of Cyprus" were, to quote the author, "carried out in a very unsatisfactory way, carelessly and unmethodically." But for the splendid and patient work of Professor Myres, who has reduced the prehistoric pottery of Cyprus to order and evolved a classification out of the chaos, we should not know one tenth of what we do know about its history in the Bronze Age. His work in the Catalogue of the Cyprus Museum and in the Catalogue of the Cesnola Collection laid a secure basis for future investigation. Dr. Gjerstad is now attempting to widen our knowledge of Prehistoric Cyprus still further and the present volume is first fruit of his researches, and it is pleasant to read his acknowledgment to Professor Myres and to learn that the latter unselfishly allowed the younger scholar to make use of his unpublished material from Lapithos. A similar acknowledgment is paid to Dr. Markides. Dr. Gjerstad has by his explorations much increased the list of known prehistoric sites. He has even found a neolithic station and best of all he has excavated inhabited sites, the stratified remains of which are an indispensable corrective for the uncertainties of tombs. The author begins with a list of the prehistoric sites and follows this with an account of the finds, especially the pottery which is classified typologically. After this analysis of the material he proceeds to arrange it chronologically and to define the relationships of Cyprus with the outside world, Asia Minor, Syria, Palestine, Egypt, and the Aegean. He divides the Bronze Age into the three periods which are now usual, Early, Middle, and Late, and each of these is subdivided into three phases. We thus have Early Cypriote I–III between 3000 and 2100 B.C., Middle Cypriote I, 2100–1900; II, 1900–1750; III, 1750–1600 B.C. and Late Cypriote I, 1600–1400; II, 1400–1200; III, 1200–1000 B.C. Apart from the typological classification of the Cypriote pottery and its chronological arrangement the differentiation of the foreign pottery found in Cyprus and the Cypriote pottery found in Palestine, Syria, and Egypt is most useful. The author is wisely cautious in his grouping of a number of vase types of varying fabrics under the heading of Syrian Ware. This is done more for convenience than as an arbitrary assignment of the vases to that region, for he candidly admits the origin of many of the types is a very open question. He advisedly adopts a rather skeptical attitude about the relationship of Cyprus and Asia Minor in the Early Bronze Age in view of the contradictory opinions advanced by others often on the slenderest evidence. They separated from each other in the Early Bronze Age and during this period Cyprus had no direct connections either with the Aegean or with the Balkans. The later relations to Asia Minor naturally remain in doubt because of our very limited knowledge of the Bronze Age culture of Asia Minor, especially of the districts nearest to Cyprus. In regard to Cyprus and the Aegean he shows that apart from one or two casual links with Crete in the Middle Period and in the beginning of the Late Period the great connections of the island are with the main-

land through Rhodes. His separation of the Late Minoan and the Late Helladic finds is a distinct step in advance. He suggests that though intercourse with the mainland of Greece began in the first phase of the Late Period it was of small moment. In the second phase there was a marked turn to the west and Late Helladic III pottery is found in Cyprus in quantities. He thinks that this was all imported and rejects the idea of a Cypro-Mycenaean Ware. As during this same time he shows that the connections of Cyprus with Syria, Palestine, and Egypt were strong, there is every hope that further crystallization of these results will produce important historical conclusions particularly as regards the influence of the Mycenaean culture in the Levant.

A work of this type is naturally easy to criticize in detail, but taking it all in all it may be unhesitatingly recommended and we look forward with much interest to the author's future excavations and researches in Cyprus. To have written a work like this in a foreign language, English, is in itself an achievement and though there are some inevitable awkwardnesses of expressions or misuses of words, they will cause no trouble to those for whom the book is intended as the conclusions are clearly and unmistakably set down.

A. J. B. Wace

South Kensington Museum
London

The Architecture of Ancient Greece. An Account of its Historic Development, being the First Part of the Architecture of Greece and Rome by William J. Anderson and R. Phené Spiers. Revised and rewritten by *William Bell Dinsmoor*. pp. 241, pls. 65, figs. 83. 8 vo. New York, 1927, Charles Scribner's Sons. $7.50.

The new edition of the *Architecture of Greece and Rome* by Anderson and Spiers, which first appeared in 1902, and in a revised form in 1907, has developed into a work of two volumes. The first of these, by Professor Dinsmoor of Columbia University, has now appeared. It is devoted to Greek architecture alone, and although the author has retained as far as possible the arrangement and language of the edition of 1907, the book is much more than a revision. It has practically become a new work. There are seven chapters entitled, the Aegean Age, the Origins of Greek Architecture, the Rise of the Doric Style, the Rise of the Ionic Style, the Culmination in Attica and the Peloponnesus, the Beginning of the Decadence, and the Hellenistic and Graeco-Roman Phases. Then follow maps, a chronological list of Greek temples, a bibliography, a glossary, and an index. Altogether there are 186 pages of text as compared with 144 in the edition of 1907.

The book contains much that is new. A striking example of this is the first chapter which is the best general survey of Aegean archaeology known to the reviewer. There are, of course, in it statements about which archaeologists will honestly differ, but as a whole it represents the best opinion of the day.

The most valuable part of the book will probably be regarded as that which deals with the development of the temple. Here the author is at his best. A few only of his ideas can be mentioned. He thinks (pp. 69f.) that the Greek temple is an independent growth and not a development from the Mycenaean megaron. He follows the edition of 1907 in denying a connection between the so-called "Proto-Doric" columns of Beni-Hasan and the earliest Greek Doric columns, and in this he will be very generally supported by Greek archaeologists. The Ionic capital he thinks (pp. 71f.) was derived from a combination of the Egyptian lily and papyrus. To pass to the temples themselves, we find him stating (p. 100)

in regard to the older of the great temples of Artemis at Ephesus that "The west (main) façade was made octastyle, the rear façade enneastyle (with nine columns), and on each flank twenty-one columns." Here he follows Fergusson and Lethaby in opposition to Murray, Hogarth, and Wilberg. Hogarth would restore it with eight columns on each of the fronts and twenty on the sides. Pliny's statement that there were CXXVII columns Dinsmoor would emend to CXVII in order to make the number fit his reconstruction.

There are few things in the book which one would wish to criticise. The idea (p. 62) that only privileged persons could enter a Greek temple and "that the one view which the people had of the god (except perhaps at festivals) was from the open doorway, to the east, at sunrise" does not seem probable. It is more likely that access to a temple might be had by anybody who complied with the local regulations. See *e.g.*, Euripides, *Ion* 228 and Herondas IV. Again, the statement that the excitement of religious festivals neutralized "the contempt which greater familiarity with the lifeless symbol in a temple might inspire" is hardly a happy one. The ancient Greek would be no more likely to have contempt for the statue of the god than the Roman Catholic today has for a statue of the Virgin; and in addition the cult statues would undoubtedly inspire admiration for their beauty as works of art. On p. 125 in connection with the Parthenon sculptures the words "Drawings said to have been made by Jacques Carrey" might better be expressed as "Drawings by an unknown artist once supposed to be Jacques Carrey." One would like, too, a little fuller discussion of secular buildings, though the author is right in laying his emphasis on the temples.

The plates are in general excellent, but an exception is that of the theatre at Ephesus (Plate LXV). Some of the figures taken over from the earlier edition are poor and should have been redrawn. In the Glossary several architectural terms used in the body of the work are not to be found, *e.g.*, consoles (p. 131), rinceaux (p. 140), finial (p. 147), rosaces (p. 148), meta (p. 152), purlins (p. 155), battens (p. 156), tenons (p. 168), ogee (p. 178). Misprints are very rare. On p. 102, fig. 27, should read Plate XXVII.

But these are small matters. The book is an excellent one and we should be grateful to Professor Dinsmoor for it. It should prove very useful alike to archaeologists and to students of architecture.

William Nickerson Bates

University of Pennsylvania

Papers on the Ethnology and Archaeology of the Malay Peninsula, by *I. H. N. Evans*, pp. 164, pl. 43. London, New York, Cambridge University Press, 1927.

The volume consists "of papers on the pagan races of Malaya, on Malay beliefs, on Malay technology, and on some of the antiquities of the Peninsula." It embraces materials published by the author before, with important additions. It is subdivided into four parts, namely: Papers on the Pagan Races; Malay Beliefs; Malay and other Technology; and Archaeology.

The items of special interest are the sections dealing with the negritos of Siam, and those referring to the prehistory of the Malay Peninsula.

The negritos studied particularly were those of the Chong district in Siam; but it was possible to make observations also on some other groups. The Chong negritos appear to be full-blooded. They are dark, though not absolutely black, in color, and show the usual short stature. Measurements of the head in six individuals show mesocephaly in the males, slight brachycephaly in the females. On

other negrito groups there are only notes. On the whole the data, both physical and cultural, leave much to be desired, though this applies to quantity rather than quality.

As to the archaeology of the Malay Peninsula, the author heard of a wild tribe who are said to be still using stone tools. All the stone implements which have yet been found in the Peninsula (except some from the Kuantan District of Pahang and the majority of those from cave deposits) "appear to be of a true neolithic culture, and it seems that they probably are of much more recent date than those of that type which are found in Europe." There are also instances of stone implements found at considerable depth, but their age, in view of the rapid erosion in these parts, is uncertain. "Rough implements of a palaeolithic (Chelleo-Mousterian like) type are not uncommon, but, in almost all cases, they have been found in association with implements which have been made by grinding."

Taking the cave remains of the Malay Peninsula, they show the following: Some of the implements are of palaeolithic type. The skeletal remains are very scarce and thus far insufficient to show anything definite. Red paint, probably for painting the body, was used. Cord-marked pottery ("au panier") was found in the caves, but only in the upper layers. It is ascribed to an upper (later) neolithic culture. It has been found with stone implements of the finely polished type. Human bones found were, in some cases, carbonized. Pounders, with grip depressions on opposite sides (sometimes only on one side) were found in a cave at Giouc-Giao in the Bac-Son massif and are said to have been common here. The mammalian remains seem to be confined to those of extant species. There are great similarities between this culture and the rude lithic culture of Indo-China.

The book is well printed and bound, and the illustrations are very serviceable, though one should like to see more and better portraits of the negrito.

Aleš Hrdlička

Smithsonian Institution
Washington, D. C.

Körper und Rhythmus, Griechische Bildwerke, with an introduction by *Friedrich Back*, pp. 4, pls. 52. Teubner, Berlin, 1927. M. 4.

This slender volume of 52 full page figures gives selections of Greek art which are exhibited in an exposition in the Landesmuseum of Darmstadt to illustrate "Körper und Rhythmus in der Kunst der Griechen." The illustrations are taken chiefly from sculpture, with a few examples of vase painting and figurines. These are arranged in groups according to the movement of the figure.

G. W. Elderkin

Princeton University

Epigraphische Untersuchungen, by *R. Laqueur*, Leipzig, Teubner, 1927. 10 M.

Ordinarily a decree passed by the popular assembly of a Greek city was prepared beforehand either by a committee such as the prytany of Athens, or by a board of officials, or by the individual who presented the motion. In the course of the debate amendments were often proposed and, if adopted, were either added as a rider to the original document or were incorporated in the body of the text. This combination of original motion and amendment forms the main part of Laqueur's study, and in pointing out amendments in the decrees which have hitherto been unobserved, he has made a notable contribution to epigraphical study.

Laqueur finds amendments in the body of Greek decrees, and their presence is revealed (1) by the repetition of formulae such as ἔδοξεν followed by δεδόχθαι, (2) by introductory phrases such as καὶ ἐπειδὴ or δὲ ἀποδοτικόν, (3) by irregularities in grammatical structure, as, for example, the shift from the aorist to the present tense, or from the genitive absolute to nominative or accusative, (4) by additions after the order for publication is expressed, (5) by a repetition of the formula of publication, or of the name of the person in the motivation, or by the recurrence of similar ideas in different phraseology, (6) by the separation of formulae usually consecutive. Furthermore Laqueur considers those decrees where the document as recorded on stone bears evidence of being a fusion of two decrees passed at different times. In some cases this fusion is self-evident. In others it has not hitherto been noted.

The addition of a rider at the end of a decree offers no difficulty. But in cases where the scribe has incorporated the amendment in the body of the original motion, the fusion has often been awkwardly carried out and sometimes contradictory statements may be found in the same document. In offering this explanation of some of the difficult problems in the interpretation of Greek inscriptions Professor Laqueur has made a notable contribution to the study of Greek epigraphy. While we are not prepared to accept all his conclusions in this study, nevertheless, epigraphists and historians must hereafter take cognizance of his investigations and theories in the study and interpretation of ancient Greek records.

Allan Chester Johnson
Princeton University

A History of the Pharaohs, Volume II: from the accession of Amenemhet I of the twelfth dynasty to the death of Thutmose III of the eighteenth dynasty, 2111 to 1441 B.C., by *Arthur Weigall*, pp. xv+424, with 16 illustrations. New York, E. P. Dutton and Company, 1927. $6.

The late Inspector-General of Antiquities of the Egyptian Government and member of the catalogue staff of the Cairo Museum has brought out with this volume the second of the set which the forthcoming Volume III will complete. His first volume with its new system of Egyptian chronology was reviewed in this Journal, XXX, 2, 1926, pp. 191–193.

Mr. Weigall is no less cocksure of his facts in this volume than he was in the previous one, and it is difficult to refrain from relishing so refreshing an attitude. The bomb of chronological explosives which Mr. Weigall has cast into the entrenchments of the older school must have created considerable consternation; at all events, thus far no retaliatory explosive, either bombastic or inflammatory, no retort even of tear gas, has appeared.

The outstanding points in the author's new solutions of the well recognized difficulties in Egyptian chronology may be stated at the outset. In his first volume, which closed with the end of the eleventh dynasty, Mr. Weigall outlined his new chronology, for the twelfth to the eighteenth dynasties. In this second volume he gives a table (pp. 4–20) of the years and dated events of the first eleven dynasties before he begins to fit the known material into the total from the Turin Papyrus, as he does for the twelfth dynasty (pp. 30–36). In a later table (pp. 224–233) he gives the dates for the dynasties XIII–XVII, and for the eighteenth alone. In his new and interesting table (pp. 239–241), in which by attributing thirteen years to the reign of Thutmose I and by dating the obelisks of Queen Hetshepsut in the sixteenth year of Thutmose II instead of Thutmose III, he arrives at what he calls, and at what seems to be, the key of the problem. Perhaps

most notable of his many new conclusions is the proof that the regnal years of the reigns of the Pharaohs coincided with the calendar years. Mr. Weigall has also corrected several dates which in his first volume were given approximately. He now gives the Sothic date as 1992 B.C. instead of "about 1990 B.C.," he corrects his former date of 1577 B.C. for the establishment of the eighteenth dynasty to 1576 B.C., and the rising of Sirius as exactly 1543 B.C. instead of his former "about 1544 B.C."

It should be repeated here that Mr. Weigall bases his new chronology upon a reconstruction of the Palermo Stone annals and comparison with the totals of years given in the Turin Papyrus, his most important and irreproachable conclusion being that the ninth and eleventh dynasties were founded at the same time, the rulers of one reigning at Heracleopolis and of the other at Thebes. That gives him an unbroken chronology, astronomically fixed, from the first to the twelfth dynasties, and counting back gave the date 3407 B.C. for the accession of Menes, the founder of the first dynasty. His prettiest piece of work, which was hinted at in the first volume, and elucidated in the second, is the settling of the method of reckoning the regnal years, a thing which has never been understood hitherto. We may give briefly his final statements of proof. The reign of Menes ending in year 63 of the annals closes with the statement "6 months and 7 days," which means that he reigned 62 years, 6 months and 7 days. Now, his successor's reign begins with 4 months and 13 days. This seems to leave 45 days unaccounted for in a 365 day year, but this, as the only dating that does not tally with even calendar years, proves that Menes instituted the calendar. Manetho states that Hetshepsut reigned "21 years and 9 months," and so on, but for Thutmose I he says, "13 years." As that Pharaoh died on New Year's Day, as recorded in an inscription in which his daughter Hetshepsut states that she began her rightful reign on New Year's Day, the fact that his reign is the only one that has no fraction added to the regnal years proves the synchronization of the regnal and calendar years.

The story of the Pharaohs of the twelfth dynasty, whose dates Weigall fixes with a simple but uncanny certainty, reads almost like a novel. Were there not so many strange looking names, and if considerable of the accessory material had been relegated to notes, the "man on the street" both could and would read the narrative with tremendous interest. Particularly compelling is the way the author produces the date 1959 B.C. as that in which Joseph was released from prison, and reconstructs the Hebrew story from the Bible, the Talmud, and Josephus, and then fits the composite into the Egyptian sources.

Dynasties XIII–XVII do not take much space (pp. 136–233), and many of those pages are filled with chronological tables. The Pharaohs of these dynasties are little known, and their long and ill-looking names will tend to militate against close acquaintance. But Chapters VI–VII (pp. 234–405) which contain the story of the eighteenth dynasty is a piece of constructive, thrilling, and authoritative work. There is no other such impressive account of this great dynasty, in which Queen Hetshepsut plays as fine a part as any of the Thutmose triad. Tutenkhamon, as Weigall spells him, belongs here too, but his fame has become great not through his own deeds, but those of Carnarvon, Carter, Breasted, and others.

The comparisons which Weigall makes from the dates on monuments checked against the quoted versions of Manetho in Josephus, Africanus, Eusebius, and the Armenian version of Eusebius, gives him a chronology with which he challenges all other Egyptologists. He gives a splendid account of the joint reign of Hetshepsut and Thutmose III, and devotes his last chapter entirely to the sole reign of the third Thutmose. In passing he corrects Breasted and the German School, who place the battle of Megiddo on May 15, and sets the date as April 29. The author

also takes a passing shot at the shipment (one in 1877 to London, and the other in 1880 to New York City) of two obelisks which Thutmose III had set up in Heliopolis. Of the one sent to England, Weigall says, "The least reparation the Londoners of today could make to the outraged spirit of the grand old warrior, Thutmose III, would be to keep his sacred jubilee monument clean, and not to dub the pathetic thing 'Cleopatra's Needle.'"

If Mr. Weigall's third volume, which will begin with the history of the first Rameses of the nineteenth dynasty, is as good as the two which have appeared, many people will be saved the supposed necessity of writing histories of Egypt.

RALPH VAN DEMAN MAGOFFIN
NEW YORK UNIVERSITY

THE MAGIC STAFF OR ROD IN GRAECO-ITALIC ANTIQUITY, by *Dr. F. M. J. De Waele.* The Hague, Jacob van der Doesstraat, 1927.

Dr. De Waele has made a valuable and fascinating study of the magic rod in the art and literature of classical antiquity, including the rod of Hermes, ῥάβδος or κηρύκειον, the thyrsus of Dionysus, the staff of Asklepios, the rod of Kirke, the mixing-rod of Persephone, the rods of the herald, and the soothsayer, the sceptre of the Homeric king, the *festuca* of the lictors, the *hasta sanguinea* of the *fetiales*, and many others. The author is in agreement with recent authorities in holding that the κηρύκειον is identical with the ῥάβδος in its origin and that the first form of the latter was a "Zwieselstab," a forked stick described by the word τριπέτηλον in the Hymn to Hermes, v, 530. The original apotropaic value of the forked stick is expressed in the latter part of that verse—

χρυσείην τριπέτηλον, ἀκήριον ἥ σε φυλάξει.

As Dr. De Waele says, "it was a kind of preventive, used to protect its bearer." He wisely refuses to give a definite answer to the questions who first carried this forked stick for this purpose and what relation it has to some primary function of Hermes, in whose hands it appears in both Iliad and Odyssey, agreeing as he does with Boetzkes that there are too many possible hypotheses to make any one beyond cavil.

In discussing the evolution of the form of the rod he notes that the plaiting of the ends of the forked stick, which results in the figure of eight form, and the other alterations, such as the serpents, are apotropaic and an effective means for increasing the power of the bearer. In this, too, he is at one with Thraemer, who emphasizes the protective value attached, especially by those of the lower stratum, to the serpents and the ram's head in warding off evil.

The discussion of the transference of the magic power of the ῥάβδος to the κηρύκειον of the herald is excellent. He points to the Talthybios relief as having the first example of this emblem of the herald known to us in Greek art. The word κηρύκειον occurs first in Thucydides and Herodotus.

Although Hermes is the special possessor of the ῥάβδος, other deities use it on occasion, as is but natural with a rod of such an origin, to which such power is attached. Of the witch-goddesses it is most potent in the hand of Kirke. Even Athena uses it in the Odyssey. It is an interesting point that the magic of the healing deity Asklepios is always practised without the aid of his staff. The little rod in the hand of Persephone on the Locrian terra-cotta reliefs is said by Dr. De Waele to be the same as the little rod of Kirke and used for stirring the sacred mixture in the bowl held by the goddess.

In the discussion of the rod of Dionysus, the thyrsus, a rod famous as that of Hermes, he follows Reinach in the Thracian derivation of the word and in the

belief that the thyrsus must, like the narthex, have been a simple stalk or branch. He speaks of the thyrsus as being by its magical power an effective weapon in the hands of the Maenads and in his reference to the help given to king Argeus of Macedonia by the mythical followers of Dionysus, the klodones, says that the Maenads had been armed by Argaeus and then put to flight with their thyrsi the Talantioi and their king. The suggestion is that the Maidens from the Hill actually struck blows with their thyrsi. Polyaenus, however, says that the king told the maidens to appear, ἐπιφανῆναι, to the enemy when the latter started to advance. They did appear and were descending from the hill, waving their thyrsi, with their garlands hiding their faces, when in the distance the Illyrian king thought they were men and took to flight in terror, leaving arms and baggage-trains, without waiting to meet the oncoming host of thyrsus-bearers. It is clear from the narration that the king had not armed the maidens, but relied on the magic power of the thyrsus-bearers.

The discussion of the gradual loss of power of the κηρύκειον and the use of a smooth, plain rod for the typically magic deeds of Hermes and other conjurers from the fifth century on is illustrated from works of art, and the further development of this wand is treated in various connections in the book. It is curious that there is but one example in classical art of the use of the magic wand by Medea. Dr. De Waele says that her magic box for her ointment and her herbs, and her branch or twig for sprinkling, play a much more important part with this witch than her wand.

Dr. De Waele has chosen an excellent motto for his delightful book—the lines from Goethe:

"Wünschelruten sind hier, sie zeigen am Stamm nicht die Schätze:
Nur in der fühlende Hand regt sich das magische Reis."

He shows in this study that he himself has indeed "die fühlende Hand."

The illustrations are many and excellent, and his command and use of the material for his subject in art and literature, and in the work of other scholars, manifest the scholarship and good sense of the author.

Grace H. Macurdy

Vassar College

A Cretan Statuette in the Fitzwilliam Museum, A Study in Minoan Costume, by *A. J. B. Wace*, pp. 49, pls. 13, figs. 2. Cambridge, 1927.

The Fitzwilliam Statuette, though of unknown provenance, is said to come from a point east of Candia, and from the discoloration of the stone it is thought by Dr. Wace to have been in a shrine which was destroyed by fire. The material of the statuette is Cretan marble of poor quality.

In the first chapter of the book on the "Provenance and Technique" we learn that the statuette was made in two pieces joined at the waist by means of a peg inserted in the upper half of the figure. This peg fits into a circular cutting in the top of the skirt, apparently much as Greek column drums were joined. While this system of construction in two parts seems hardly necessary in the case of a statuette of stone, the author is of the opinion that the sculptor was influenced by the coroplasts of Eastern Crete who usually made the terracotta statuettes in two pieces from the Middle Minoan I to the Late Minoan III period.

The second chapter, the "Description and Costume," shows an exact knowledge of dressmaking and gives a detailed description of the flared skirt, the apron cut on the bias, the placket, the cutting and boning of the bodice, etc.

Chapter III, "Analogous Illustrations of Costume," is particularly valuable, as it describes many well-known examples of Minoan and Mycenaean female figures,

whether in fresco, bronze, gold and ivory, or terracotta. Each part of the costume —headdress, bodice, apron, and skirt—is given in detail including the decorative patterns and colors used.

In the chapter on "Textile Materials and Methods," the author's special knowledge of textiles has made it of great interest. The opinion is expressed that linen material decorated with inwoven patterns of colored thread as well as linen embroidered in wool was used in Minoan-Mycenaean times. Bead work and applied metal work were also possible.

The present restoration of the Fitzwilliam lady shows the flounces of the skirt horizontal on the sides and in front, and meeting in a V-shaped point in the center of the back. This may be correct and it is, of course, unsafe to make suggestions on the basis of photographs alone. Since, however, the figure has a central pivot at the waist, it may perhaps be that the skirt should be reversed and that the pointed flounces belong in the front. The bronze statuette from Berlin which is of contemporary date is described as having flounces horizontal in back, but dipping to a point in front. The chryselephantine statue in Boston has flounces pointed in back and in front both, but those in front are deeper and more accentuated.

The author speaks of the placket of the skirt in the case of the Petsofas terracotta as being below the point of the bodice in front and covered with the ends of the girdle. In the present arrangement of the Fitzwilliam statuette if the placket is in a similar position it must have been cut specially, as the author thinks that the material joined where the flounces came together in points at the back. This difficulty would be overcome by reversing the skirt. If one thinks that by so doing the hips would be too high in comparison with the position of the abdomen, one needs but to look at the chryselephantine statue in Boston to note how low is the swell of the abdomen and at the Woman with the Casket from Tiryns to see how high up the curve of the hips may occur. Moreover, by reversing the skirt, the girdle would more nearly correspond to that of the Boston Goddess, for her girdle is higher in front than in back.

The author concludes his study by saying that the date of the Fitzwilliam Statuette is L. M. I, namely 1600 B.C., that she is probably a votary and originally formed part of a cult group. The important fact is that the Fitzwilliam Statuette is "the earliest piece of true sculpture in stone yet found in Greek soil and is . . . almost two centuries older than the Lion Gate of Mycenae."

KATE MCK. ELDERKIN

PRINCETON, N. J.

ESSAYS IN AEGEAN ARCHAEOLOGY, PRESENTED TO SIR ARTHUR EVANS IN HONOUR OF HIS 75TH BIRTHDAY, edited by *S. Casson*, pp. ix+142, pls. 21, frontispiece, and figs. Oxford University Press, 1927.

It comes as something of a shock to those who are not personally acquainted with Sir Arthur Evans to find that he has fulfilled a complete lustrum beyond man's allotted span of life, and that in the course of nature his long and brilliant career as an active archaeologist must soon come to an end. In the island of Crete his enterprise, which has latterly been directed towards the restoration of Minoan monuments, appears as keen as it was a couple of decades ago. Of his recent writings, it may be said that, so far are they from showing any of the weaknesses that we associate with advancing age, they possess not only a middle-age vigor and precision but likewise no small element of youthful energy and inspiration.

The studies which this book contains are slighter than those ordinarily found in the *festgabe* type of work. It was seemingly the purpose of the producers to bring

out a volume of moderate size which might enjoy a much wider circulation than the usual sumptuous tome. The compliment paid to Sir Arthur thereby is all the more genuine. As regards the contributors, the name of no living English scholar who has greatly distinguished himself in Aegean research—with the notable exception of Mr. A. J. B. Wace—is lacking.

In the first article, Professor V. Gordon Childe, of Edinburgh, indicates certain Minoan influences on the Bronze Age culture of Central Europe. He finds that various weapons and trinkets, imported presumably in exchange for the gold of Transylvania, entered the region during the L. M. II and III periods, by way of the Danube. Dr. A. E. Cowley, of Oxford, contributes a note on a number of similarities which he observes between Minoan signs and Cypriote syllabaries. The subject of Aegean writing is further touched upon by Mr. T. E. Peet, who discusses—with somewhat negative results, it must be acknowledged—an Egyptian tablet in the British Museum which purports to supply a list of "Keftiu" names. A strong defense of the term Keftiu as denoting the ancient Cretans, and not, as has been maintained, Cilicians, is furnished by the veteran scholar, Dr. H. R. Hall, of the British Museum, who in an additional note draws attention to a predynastic Egyptian double-axe found at Luxor.

Dr. L. R. Farnell writes a lengthy and valuable essay on the subject of the debt owed by Greek religion to Crete. His study appears to have been just too early to have encountered the *Minoan-Mycenaean Religion and Its Survival in Greek Religion* of Nilsson. His views are distinctly discouraging to those who put their confidence in easy, if brilliant, conjecture. Mr. E. J. Forsdyke discusses a late Mycenaean vase in the British Museum, and Professor J. L. Myres publishes several "bird-jugs" from Cyprus in the Pitt-Rivers Museum at Oxford. While the latter writer's observations of form and design are admirable, his suggestions regarding the technology of the pieces appear very doubtful.

Dr. G. F. Hill, of the British Museum, publishes a number of Cretan coins from the Seager Collection. Owing to the necessarily late date of these, this article seems quite out of place in the book. The interesting suggestion is made by Dr. D. G. Hogarth (recently deceased), of the Ashmolean Museum, that the so-called nature goddess figurines frequently found in Aegean tombs are of the nature of *ushebtis*, destined to minister to the wants of the dead in the future world. It would be interesting to observe, if possible, in forthcoming excavations on Aegean sites, whether female types of this sort are to be found invariably in the tombs of men. In a careful paper, Sp. N. Marinatos attempts to reconstruct a dagger with representations of swimmers which was found in a Vaphio tomb. Dr. G. Rodenwaldt discusses (in German) a well-preserved votive cup and the fragment of another, which have within them the slightly modelled figure of a man with his hand raised in adoration. He assigns the type to the L. M. period. References to Crete in Babylonian texts and in the Old Testament are treated in an illuminating way by Dr. A. H. Sayce.

The most pretentious article is perhaps the concluding one, from the pen of the Greek scholar, M. Stephanos Xanthoudides. He publishes a number of potter's-wheel disks, or "wheel-bats," as they are more generally called in this country at least, which were discovered on various Minoan sites in Crete and were formerly regarded as tables or the lids of pithoi. The resemblance of these to modern "bats" is indeed most extraordinary. The study contains also some account of the methods of modern Cretan potters who specialize in the making of pithoi.

A. D. FRASER

ALFRED UNIVERSITY